ANALYSIS

This ordinance repeals those provisions of Title 26 – Building Code – of the Los Angeles County Code that had incorporated by reference portions of the 2013 Edition of the California Building Code and replaces them with provisions incorporating by reference portions of the 2016 California Building Code, published by the California Building Standards Commission, with certain changes and modifications.

State law requires that the County's Building Code contain the same requirements as are contained in the building standards published in the most recent edition of the California Building Code. State law allows the County to change or modify these requirements only if it determines that such changes or modifications are reasonably necessary because of local climatic, geological, or topographical conditions.

The changes and modifications to requirements contained in the building standards published in the 2016 California Building Code that are contained in this ordinance are based upon express findings, contained in the ordinance, that such changes are reasonably necessary due to local climatic, geological, or topographical conditions.

This ordinance also makes certain modifications to the administrative provisions of Title 26 and to certain chapters of Title 26 that relate to subjects not covered by the California Building Code.

MARY C. WICKHAM
County Counsel

Carole Suzuki

By
CAROLE B. SUZUKI
Senior Deputy County Counsel
Public Works Division

CBS:lm

Requested: 07/28/16
Revised: 10/12/16

ORDINANCE NO. _____

An ordinance amending Title 26 – Building Code – of the Los Angeles County Code, by adopting by reference the 2016 California Building Code, with certain changes and modifications, and making other revisions thereto.

The Board of Supervisors of the County of Los Angeles ordains as follows:

SECTION 1. Sections 119.1.2 through 119.1.14 of Chapter 1, Chapters 2 through 35, and Appendices C, I, and J, which incorporate by reference and modify portions of the 2013 California Building Code, are hereby repealed.

SECTION 2. Chapter 1 is hereby amended to read as follows:

100 ADOPTION BY REFERENCE

Except as hereinafter changed or modified, Sections 1.2 through 1.14 of Chapter 1 of Division I of that certain building code known and designated as the ~~2013~~2016 California Building Code, as published by the California Building Standards Commission, are adopted and incorporated, by reference, ~~and incorporated~~ into this Title 26 of the Los Angeles County Code as if fully set forth below, and shall be known as Sections 119.1.2 through 119.1.14, respectively, of Chapter 1 of Title 26 of the Los Angeles County Code.

Except as hereinafter changed or modified, Chapters 2 through 35 and Appendices C, I, and J of that certain building code known and designated as the ~~2013~~2016 California Building Code, as published by the California Building Standards Commission, are adopted and incorporated, by reference, ~~and incorporated~~ into this Title 26 of the Los Angeles County Code as if fully set forth below, and shall be known

as Chapters 2 through 35, and Appendices C, I, and J of Title 26 of the Los Angeles County Code.

A copy of said California Building Code, hereinafter referred to as the CBC, including the above-designated appendices, shall be at all times maintained by the Building Official for use and examination by the public.

SECTION 101 TITLE, PURPOSE AND INTENT

. . .

101.3 Scope.

. . .

Additions, alterations, repairs, relocations and changes of use or occupancy in all existing buildings and structures shall comply with the provisions for new buildings and structures except as otherwise provided in Section 109 and ~~Chapter 34 of this~~ Title 33 – Existing Building Code.

. . .

SECTION 102 UNSAFE BUILDINGS

102.1. Definition.

All buildings or structures which are structurally unsound or not provided with adequate egress, or which constitute a fire hazard, or are otherwise dangerous to human life, or which in relation to existing use constitute a hazard to safety or health, or public welfare, by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster damage, lack of an approved water supply, electrical hazard, unsafe gas piping or appliances, or abandonment as specified in this Code or any other

effective ordinance, are, for the purpose of this Chapter, unsafe buildings. Whenever the Building Official determines by inspection that a building or structure, whether structurally damaged or not, is dangerous to human life by reason of being located in an area which is unsafe due to hazard from landslide, settlement, or slippage or any other cause, such building shall, for the purpose of this Chapter, be considered an unsafe building.

No person shall own, use, occupy or maintain any unsafe building.

All unsafe buildings are hereby declared to be public nuisances. In addition to instituting any appropriate action to prevent, restrain or correct a violation of this section, the Building Official may abate an unsafe condition ~~by~~or order that the unsafe condition be secured, repair~~ed~~, rehabilitati~~oned~~, demoliti~~onshed~~ or remova~~led as deemed necessary by the Building Official~~ in accordance with the procedure specified in this ~~chapter~~Code.

. . .

102.2 Notice of Unsafe Building.

The Building Official shall examine or cause to be examined every building or structure or portion thereof reported as dangerous or damaged and, if, in the Building Official's opinion, such is found to be an unsafe building as defined in this Chapter, the Building Official shall give to the party concerned written notice stating the defects thereof. If necessary, such notice shall also require the building, structure, or portion thereof to be vacated forthwith and not reoccupied until the required repairs and

improvements are completed, inspected and approved by the Building Official. This notice may require the owner and/or person in charge of the building or premises, to:

1. Immediately remove, repair, backfill, shore up or secure such unsafe condition, and/or

2. ~~w~~Within 48 hours, ~~to~~apply for required permit(s) and commence either the required repairs or improvements or demolition and removal of the building or structure or portions thereof. ~~and a~~All such work shall be completed within 90 days from date of notice, unless otherwise stipulated by the Building Official. ~~If necessary, such notice shall also require the building, structure, or portion thereof to be vacated forthwith and not reoccupied until the required repairs and improvements are completed, inspected and approved by the Building Official.~~

. . .

The Building Official may ~~file~~record a notice of violation with the County Recorder's Office ~~a declaration~~ that the building or structure described has been inspected and found to be an unsafe building, as defined in this Chapter, and that the owner thereof has been so notified. After all required work has been completed, the Building Official shall ~~file~~record a notice rescinding the prior notice of violation with the County Recorder's Office ~~a properly executed form terminating the above declaration~~.

102.3 Posting of signs.

The Building Official shall cause to be posted on buildings required to be vacated or remain unoccupied a notice ~~to read substantially as follows: "DO NOT ENTER. UNSAFE TO OCCUPY. Department of Public Works, Building and Safety Division,~~

~~County of Los Angeles." Such notice shall be posted at the main entrance and shall be visible to persons approaching the building or structure from a street. Such notice shall remain posted until the required repairs, demolition or removal are completed. Such notice shall not be removed without written permission of the Building Official and no person shall enter the building except for the purpose of making the required repairs or of demolishing the building~~of "RESTRICTED USE" or "UNSAFE – Do Not Enter or Occupy" as described in Section 102.6.

. . .

102.5 Unsafe Buildings; Demolition or Repair.

102.5.1 Work by ~~c~~County.

If the repairs, ~~or~~ demolition or other work necessary to remove the unsafe condition as set forth in the Notice of Unsafe Building ~~in~~is not made within the designated period and a hearing has not been requested by any party concerned, the Building Official shall request that a hearing be held regarding the unsafe condition. If the finding by the Building Board of Appeals is not complied with within the period designated by the Board, the Building Official may then secure or demolish ~~or repair~~ such portions of the structure, or may cause such work to be done, to the extent necessary to eliminate the hazard determined to exist by the Building Board of Appeals.

102.5.2 Emergency procedure.

Whenever any portion of a structure constitutes an immediate hazard to life or property, and in the opinion of the Building Official, the conditions are such that repairs, or demolition must be undertaken within less than the designated period, the Building

Official may ~~make~~take necessary action, such as performing alterations, ~~or~~ repairs, and/or ~~demolish such portions~~demolition of the structures, ~~as are necessary~~ to protect life or property, or both, after giving such notice to the parties concerned as the circumstances will permit or without any notice whatever when, in the Building Official's opinion, immediate action is necessary.

102.5.3 Costs.

The costs ~~involved in~~incurred by actions taken pursuant to Sections 102.5.1 and 102.5.2 ~~of such demolition or repair~~, including the entire cost of the services rendered by the County, shall be a special assessment against the property upon which the structure stands, or stood. The Building Official shall notify, in writing, all parties concerned of the amount of such assessment resulting from such work. Within five days of the receipt of such notice, any such party concerned may file with the Building Official a written request for a hearing on the correctness or reasonableness, or both, of such assessment. Any party concerned who did not receive a notice pursuant to Section 102.2 and who has not had a hearing on the necessity of the demolition, ~~or~~ repairs, or other work in such request for hearing also may ask that such necessity be reviewed. The Building Board of Appeals thereupon shall set the matter for hearing; give such party concerned notice thereof as provided in Section 102.4.2; hold such hearing and determine the reasonableness or correctness of the assessment, or both; and if requested, determine the necessity of the demolition, ~~or~~ repairs, or other work. The Building Board of Appeals, in writing, shall notify such party concerned of its decision. If the total assessment determined as provided for in this section is not paid in

full within 10 days after receipt of such notice from the Building Official or the Building Board of Appeals, as the case may be, the Building Official shall record in the office of the Department of Registrar-Recorder a statement of the total balance still due and a legal description of the property. From the date of such recording, such balance due shall be a special assessment against the parcel.

. . .

102.6 Posting of signs for safety assessment.

The Building Official shall cause placard(s) to be posted on buildings upon completion of a safety assessment. The placard shall be posted at the main entrance(s) and shall be visible to persons approaching the building or structure from a street. The placard shall remain posted until the required repairs, demolition, removal, or other work are completed to the satisfaction of the Building Official and shall not be removed without written permission of the Building Official. No person shall enter the building or portion of the building if so noted except as authorized in writing by the Building Official for the purpose of performing required repairs, demolition, removal, or other work.

All placards shall read "Department of Public Works, Building and Safety Division, County of Los Angeles." As applicable, the placards shall identify the nature of the damage to, or condition of, the building or structure and restrictions to access or occupancy as follows:

1. "INSPECTED – Lawful Occupancy Permitted" (green placard) shall be posted on any building or structure where no apparent structural hazard has been

found. This placard does not establish that there is no damage to the building or structure.

2. "RESTRICTED USE" (yellow placard) shall be posted on each building or structure where a condition may pose a hazard to life, health or safety, which has resulted in some form of restriction to continued access or occupancy. This placard will note the type of damage or condition encountered and restrictions on access or occupancy.

3. "UNSAFE – Do Not Enter or Occupy" (red placard) shall be posted on each building or structure where a condition exists such that continued access or occupancy poses a hazard to life, health or safety. Buildings or structures posted with this placard shall not be entered under any circumstances except as authorized in writing by the Building Official. This placard is not to be used or considered as a demolition order. This placard will note the type of damage or condition encountered and prohibit entry.

SECTION 103 VIOLATIONS AND PENALTIES

. . .

103.4.2 Recordation.

If (1) the Building Official determines that any property, building, or structure, or any part thereof is in violation of any provision of this Code; and if (2) the Building Official gives written notice as specified below of said violation; then the Building Official may have sole discretion to, at any time thereafter, record with the County Recorder's

Office a notice that the property and/or any building or structure located thereon is in violation of this Code.

Following the recordation of the notice of violation, the Building Official is not required to conduct an inspection or review of the premises to determine the continued existence of the cited violation. It is the responsibility of the owner or other interested party to meet the requirements of this Code to remove the violation.

. . .

103.4.4 Rescission.

Any person who desires to have recorded a notice rescinding the notice of violation must first obtain the necessary approvals and permit(s) to correct the violation. Once the Building Official determines that the work covered by such permit(s) has been satisfactorily completed, the Building Official may record a notice rescinding the prior notice of violation.

~~Following the recordation of the notice of violation the Building Official is not required to make any inspection or review of the premises to determine the continued existence of the cited violation. It is the responsibility of the property owner, occupant or other similarly interested private party to comply with the above provisions.~~

103.4.5 Appeal.

Any person having any right, title, lien or interest in the property so recorded or any part thereof may request a hearing before the Code Enforcement Appeals Board to appeal the violation notice. The request for hearing shall be submitted in writing within 30 days of the notice from the Building Official provided in accordance with

Section 103.4.3. The time for appeal may be extended by the Building Official for good cause shown. Failure to submit a timely written request for appeal or to appear at a scheduled hearing shall be deemed a waiver of the right to a hearing before the Code Enforcement Appeals Board.

SECTION 104 ORGANIZATION AND ENFORCEMENT

. . .

104.2 Powers and Duties of the Building Official.

104.2.1 General.

The Building Official is hereby authorized and directed to enforce all the provisions of this Code, including the Electrical Code, the Plumbing Code, the Mechanical Code, the Residential Code, the Existing Building Code, and the Green Building Standards Code, and to make all inspections pursuant to the provisions of each such Code. For such purposes, the Building Official shall have the powers of a law enforcement officer.

. . .

104.2.3 Right of Entry.

104.2.3.1 Whenever it is necessary to make an inspection to enforce any of the provisions of or perform any duty imposed by this Code or other applicable law, or whenever the Building Official or an authorized representative has reasonable cause to believe that there exists in any building, structure or grading, or upon any premises, any condition which makes such building, structure, ~~of~~ grading or premises hazardous, unsafe, or dangerous for any reason specified in this Code or other similar

law, the Building Official or an authorized representative hereby is authorized to enter such property at any reasonable time and to inspect the same and perform any duty imposed upon the Building Official by this Code or other applicable law; provided that (i) if such property is occupied, then the Building Official shall first present proper credentials to the occupant and request entry explaining the reasons therefor; and (ii) if such property is unoccupied, then the Building Official shall first make a reasonable effort to locate the owner or other persons having charge or control of the property and request entry, explaining the reasons therefor.

. . .

104.2.3.3 "Authorized representative shall include the officers named in ~~Subs~~Section 104.2.2 and their authorized inspection personnel.

104.2.3.4 No person shall fail or refuse, after proper demand has been made upon such person as provided in this subsection, to promptly permit the Building Official or an authorized representative to make any inspection provided for by ~~Subs~~Section 104.2.3.2. Any person violating ~~this subdivision~~ Section 104.2.3 shall be guilty of a misdemeanor.

. . .

104.2.7 Modifications.

Whenever there are practical difficulties involved in carrying out the provisions of this Code, the Building Official ~~may~~shall have the authority to grant modifications on a case-by-case basis, upon application by the owner or the owner's authorized agent, provided the Building Official shall first find that a special individual reason makes the

strict letter of this Code impractical and that the modification is in conformity with the spirit and purpose of this Code and that such modification does not lessen any fire-protection or other life-safety-related requirements, accessibility, or any degree of structural integrity. The details of any action granting modifications shall be recorded and entered in the files of the code enforcement agency.

A written application for ~~the granting of such~~a modifications shall be submitted together with a filing fee of $231.00. When ~~actual~~ staff review exceeds two hours, an additional fee of $115.50 per hour shall be charged for each hour or fraction thereof in excess of two hours.

104.2.8 Alternate Materials, Designs and Methods of Construction.

. . .

A written application for use of an alternate material, design or method of construction shall be submitted together with a filing fee of $231.00. When ~~actual~~ staff review exceeds two hours, an additional fee of $115.50 per hour shall be charged for each hour or fraction thereof in excess of two hours.

~~For the requirements as an approved fabricator see Sections 202 and 1702.1.~~

104.2.9 Tests.

. . .

~~Reports of such tests shall be retained by the Building Official in accordance with the County's guidelines for the retention of public records.~~

. . .

104.2.11 Demolition.

Whenever the term "demolition" or "demolish" is used in this Code, it shall include the removal of the resulting debris from such demolition, the abandonment of any sewer or sewage disposal system when applicable, and the protection or filling of excavations exposed by such demolition, as may be required by this Code or other ordinances or laws.

. . .

104.3 Definitions.

. . .

BUILDING CODE or LOS ANGELES COUNTY BUILDING CODE shall mean Title 26 of the Los Angeles County Code.

. . .

EXISTING BUILDING CODE shall mean Title 33 of the Los Angeles County Code.

. . .

SECTION 105 APPEALS BOARDS

105.1 Building Board of Appeals.

105.1.1 General.

Unless otherwise provided for below, in order to conduct the hearings provided for in this Code, there shall be a Building Board of Appeals consisting of five members who are qualified by experience and training to pass upon matters pertaining to building construction. One member shall be a practicing architect, one a ~~competent~~ builder who

is a licensed general contractor, one a lawyer, and two ~~shall be~~ structural engineers, each of whom shall have had at least 10 years' experience as an architect, builder, lawyer, or structural engineer. The Building Official shall be an ex officio member and shall act as secretary to the Board. The members of the Building Board of Appeals shall be appointed by the Board of Supervisors and shall hold office at its pleasure. The Building Board of Appeals shall adopt reasonable rules and regulations for conducting its investigations. Each member of the Board shall be compensated for each meeting attended as provided from time to time by the County Code.

. . .

105.3 Building Rehabilitation Appeals Board.

~~There shall be a Building Rehabilitation Appeals Board as defined by Section 9906.~~In order to conduct the hearings provided for in Section 102.4 and Chapters 98 and 99 of this Code, there shall be and is hereby created a Building Rehabilitation Appeals Board. The Building Rehabilitation Appeals Board shall consist of five members who are qualified to pass on matters pertaining to substandard buildings and property. The members of the Board shall be appointed by and hold office at the pleasure of the Board of Supervisors. The Board shall adopt reasonable rules and regulations for conducting its investigations. The Building Official shall be an *ex officio* nonvoting member and act as secretary. The Building Official shall keep a record of all proceedings and notify all parties concerned of the findings and decisions of the Board.

Every member of the Building Board of Appeals established by Section 105.1 is an *ex officio* alternate member of the Building Rehabilitation Appeals Board and may serve in the place and stead of any regular member of the Building Rehabilitation Appeals Board who is absent from any meeting and, at such meeting, shall be deemed to be a regular member of the Building Rehabilitation Appeals Board.

105.4 Code Enforcement Appeals Board.

In order to conduct the hearings provided for in Section 103.4.5 and Government Code Section 54988, there shall be a Code Enforcement Appeals Board. The Code Enforcement Appeals Board shall be comprised of the same five members and alternates as the Building Rehabilitation Appeals Board. The Building Official shall be an *ex officio* nonvoting member and act as secretary.

. . .

105.6 Tenure.

The tenure of appointed members of the Building Board of Appeals, Accessibility Appeals Board and Building Rehabilitation Appeals Board shall be subject to the provisions of Section 5.12.050 of Title 5 of the Los Angeles County Code.

SECTION 106 PERMITS

. . .

106.3 Work Exempted.

A building permit shall not be required for the following:

1. One-story detached accessory buildings used as tool and storage sheds, playhouses, shade structures, and similar uses, provided the gross floor area does not

exceed 120 square feet (11.15 m^2), the height does not exceed 12 feet (3.69 m), and the maximum roof projection does not exceed 24 inches (610 mm).

2. Fences ~~not over 6 feet (1.8 m) in height~~ which are not used as a barrier to private swimming pools, spas, or hot tubs~~.~~, and monument signs, provided that:

2.1 Masonry or concrete fences do not exceed 6 feet (1.8 m) in height and are set back from public ways a distance at least equal to the fence height.

2.2 Fences constructed of other materials do not exceed 6 feet (1.8 m) in height.

2.3 Monument signs do not exceed 6 feet (1.8 m) in height.

3. Steel tanks not storing hazardous material as defined in the Fire Code supported on a foundation not more than two feet (610 mm) above grade when the overall height to diameter or width does not exceed 1½ times the diameter.

. . .

15. Decks~~Platforms~~, walks and driveways not more than 30 inches (762 mm) above grade and not over any basement or story below, and which are not part of an accessible route.

. . .

17. Playground equipment not to exceed 12 feet (3.69 m) in height accessory to Group R-3 occupancy.

18. One-story detached animal cages and ~~buildings or structures used as dog~~ kennels, chicken coops, and animal pens~~, or shade structures~~ provided the gross floor area does not exceed ~~120~~400 square feet (~~11.15~~37.2 m^2) and the height does

not exceed 6 feet (1.8 m) and at least one horizontal dimension does not exceed 12 feet (3.69 m).

19. Non-combustible livestock shelters provided that the gross floor area does not exceed 300 square feet (27.9 m^2), the height does not exceed 12 feet (3.69 m), and at least 3 sides are open.

20. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work where disabled access requirements do not apply.

21. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

. . .

106.4.2 Plans and Specifications.

Within each application for a building permit, and when required by the Building Official for enforcement of any provisions of this Code, ~~two sets of~~complete plans and specifications shall be submitted. The Building Official may require plans and specifications to be prepared and designed by an engineer, architect or landscape architect licensed or registered by the state to practice as such. Submittals shall include ~~construction~~special inspection ~~requirements as defined in Section 106.4.5~~and structural observation statements required by Chapter 17.

. . .

106.4.3 Information on Plans and Specifications.

Construction documents shall be dimensioned and drawn to scale upon suitable material. Electronic media documents are permitted to be submitted ~~when approved by~~

~~the Building Official~~. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this Code and relevant laws, ordinances, rules, and regulations, as determined by the Building Official. The first sheet of each set of plans shall give the house and street address of the work and the name and address of the owner and persons who prepare them. Plans shall include a plot plan showing the location of the proposed building and of every existing building on the property. In lieu of detailed specifications, the Building Official may approve references on the plans to a specific section or part of this Code or other ordinances or laws.

. . .

~~**106.4.5 Inspection program.**~~

~~When special inspection is required by Chapter 17, the architect or engineer of record shall prepare an inspection program which shall be submitted to the Building Official for approval prior to issuance of the building permit. The inspection program shall designate the portions of the work that require special inspection and indicate the duties of the special inspectors.~~

~~The special inspector may be employed by the owner, the engineer or architect of record, or an agent of the owner, but shall not be employed by the contractor or his employees, representatives or agents, or any other person performing the work.~~

~~When structural observation is required by Chapter 17, the inspection program shall name the individuals or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur.~~

~~The inspection program shall include samples of inspection reports and provide time limits for submission of reports.~~

106.5 Permits.

106.5.1 Issuance.

. . .

When the Building Official issues the permit, the Building Official shall endorse in writing or stamp on ~~both sets of~~the plans and specifications "APPROVED." Such approved plans and specifications shall not be changed, modified or altered without authorization from the Building Official, and all work shall be done in accordance with the approved plans. The issuance of a permit shall not be deemed to certify that the site of the described work is safe.

. . .

106.5.4 Expiration.

. . .

Permits for rebound tumbling equipment as defined in Chapter 66 shall be valid for a period of not exceeding one year. Permits for portable amusement devices and for temporary ~~Group A-4 or~~ Group A-5 structures shall be valid for a period not exceeding 30 days. Permits for amusement devices erected under a building permit shall be valid for a period of 90 days.

106.5.6 Combined building permit.

A combined building permit may be issued for new one-family or two-family dwellings, and additions and alterations to one-family or two-family dwellings, and

attached garages, which will include all building, electrical, plumbing, heating, ventilating, and air-conditioning work, but will not include grading and landscape which require permits pursuant to any provision of this Code; or sewer connections. The combined building permit shall be subject to the requirements of this Code, the Residential Code, the Existing Building Code, the Electrical Code, the Plumbing Code, the Mechanical Code, and the Green Building Standards Code, except that the fee for the combined building permit shall be as provided in Section 107.1 of this Code.

106.5.7 Combined swimming pool permit.

A combined swimming pool permit may be issued for a new swimming pool, spa or hot tub, which will include all building, electrical, plumbing, heating and excavation work. The combined swimming pool permit shall be subject to the requirements of this Code, the Residential Code, the Existing Building Code, the Green Building Standards Code, the Electrical Code, the Plumbing Code and the Mechanical Code, except that the fee for the combined swimming pool permit shall be as provided in Section 107.1 of this Code.

SECTION 107 FEES

107.1 Building Permit Fees.

. . .

EXCEPTIONS:

1. ~~A combined swimming pool permit may be issued for a new swimming pool, spa or hot tub which will include all building, electrical, plumbing, heating and excavation work.~~The total permit fee for ~~the~~a combined swimming pool permit, as

provided in Section 106.5.7, shall be two times the building permit fee determined from Table 1-A and the barrier inspection fee of Section 107.9, item K.

2. The total permit fee for a combined building permit, as provided in Section 106.5.6, shall be 1.60 times the building permit fee determined from Table 1-A.

107.2 Plan Checking or Review Fees for Buildings or Structures.

When an application for a building permit is submitted for review, ~~whether or not plans and specifications are required by Section 106.4.2,~~ a fee shall be paid to the Building Official. Said fee shall be equal to 85 percent of the building permit fee as set forth in Table 1-A, provided, however, the minimum fee shall be $86.30.

. . .

107.9 Other fees.

The following fees shall be paid before a permit is issued, inspection made, occupancy allowed or device operated:

1. In addition to the fees set forth in Items A through K, below, for issuance of each inspection application receipt $29.20

. . .

C. ~~For inspection of the repair or rehabilitation of a building or structure declared substandard by notice filed with the Department of Registrar-Recorder, the fee shall be as set forth in Table 1-A, but shall not be less than $401.40~~Reserved

. . .

E. For inspection or reinspection of ~~Group A-4 or~~ A-5 structures, each $230.60

. . .

107.19 Fee Exemption—Affordable Housing.

. . .

BUILDING FEE shall include plan check, permit and inspection fees required by Titles 26, 27, 28, 29, 30, ~~and~~ 31 and 33 of the Los Angeles County Code.

. . .

SECTION 108 INSPECTIONS

. . .

108.4 Required Inspections.

108.4.1 General.

Reinforcing steel or structural framework of any part of any building or structure shall not be covered or concealed without first obtaining the approval of the Building Official.

~~Protection of joints and penetrations in fire-resistive assemblies shall not be concealed from view until inspected and approved.~~

Excavation and foundation reinforcement shall not be covered or concealed without first obtaining the approval of the Building Official.

Upon notification from the permit holder or the permit holder's agent, the Building Official shall make the ~~following~~ inspections as set forth in Sections 108.4.2 through 108.4.8.

. . .

108.4.4 Frame inspection.

Inspection shall be made after the roof, roof deck or sheathing, all framing, braced walls, fire blocking and bracing are in place and all conduits, plumbing pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, and heating wires, conduits, plumbing pipes, and ducts are approved.

. . .

108.4.6 Fire and smoke resistant penetrations.

Inspection shall be made after all protection of joints and penetrations in fire resistance rated assemblies, smoke barriers and smoke partitions are installed, but prior to concealing the joints and penetrations.

108.4.7 Energy efficiency elements.

Inspections shall be made after the insulation, fenestration, duct installation, and mechanical and plumbing equipment has been installed, but prior to any of said elements being concealed.

108.4.68 Final inspection.

Inspection shall be made after finish grading and the building is completed and ready for occupancy.

. . .

108.6 Special Inspector.

Before commencing duties, the special inspector shall be examined and shall obtain a certificate of registration from the Building Official. As to the written portion of

the required examination, the Building Official may administer a written examination or the Building Official may require that a special inspector applicant successfully complete an examination administered by the International Code Council (ICC). Applications shall be made in writing and shall be accompanied by a fee of $257.70. When the Building Official requires the ICC Certificate in lieu of administering a written examination, the application shall be accompanied by proof of the required Certificate and a fee of $160.20. A separate application and a separate fee shall be required for each type of work, and shall be valid for one year from the application submission date. Requests for refunds shall be made within 30 days of expiration of the application, only for applicants who did not take the exam. Applicants failing to pass an examination shall be ineligible for re-examination for a period of 30 days. Applicants failing to pass an examination for a second time shall be ineligible for re-examination for a period of 180 days, at which time Aa new application and fee shall accompany ~~each~~the request for re-examination. Unless sooner revoked, certificates of registration for special inspectors shall expire biennially on June 30, and must be renewed by payment of biennial renewal fee of $106.60. Registrations issued from January 1 through June 30 in renewal years shall be valid through June 30 of the successive biennial period.

. . .

SECTION 108.9 Reinspections.

An inspection fee may be assessed for reinspection, as determined by the Building Official, for any of the following reasons:

1. The portion of work for which inspection is requested is not complete;

2. Corrections given by the Building Official are not completed;

3. There is inadequate work site access preventing inspection;

4. The inspection record card is not posted or otherwise available on the work site;

5. The approved plans are not available for the inspector;

6. Work has deviated from the approved plans and has not been approved by the Building Official.

This Section is not to be interpreted as requiring additional hourly inspection fees the first time a job is rejected for failure to comply with the requirements of this Code.

To obtain reinspection, the applicant shall pay the hourly inspection fee in advance, as provided in Section 107.9.

SECTION 109 USE AND OCCUPANCY

. . .

109.2 Change in Use.

Changes in the character or use of a building shall not be made except as specified in ~~Section 3406 of this Code~~the Existing Building Code.

109.3 Certificate Issued.

When the building or structure has passed final inspection, and when the building or structure complies with the applicable laws and regulations, and the required fees have been paid, the Building Official shall issue a certificate of occupancy which shall contain the following:

1. The building ~~permit~~ or miscellaneous~~occupancy~~ permit number.

. . .

109.4 Temporary Certificate.

If the Building Official finds that no substantial hazard will result from occupancy of any building or portion thereof before the same is completed, the Building Official may issue a temporary certificate of occupancy for the use of a portion or portions of a building or structure prior to the completion of the entire building or structure. A request for issuance of a temporary certificate of occupancy must be made in writing.

. . .

SECTION 110 PROHIBITED USES OF BUILDING SITES

. . .

110.2 Geotechnical Hazards.

110.2.1 No building or grading permit shall be issued under the provisions of this section when the Building Official finds that property outside the site of the proposed work could be damaged by activation or acceleration of a geotechnically hazardous condition and such activation or acceleration could be attributed to the proposed work on, or change in use of, the site for which the permit is requested. For the purpose of this section, a geotechnically hazardous condition does not include surface displacement due to earthquake faults.

~~Except as provided in Section 110.2.3, work requiring a building or grading permit by this Code is not permitted in an area determined by the Building Official to be subject to hazard from landslide, settlement, or slippage. For the purpose of this~~

~~Section, landslide, settlement, or slippage does not include surface displacement due to the earthquake faults.~~

110.2.2 Except as provided in Section 110.2.3, work requiring a building or grading permit by this Code is not permitted in an area determined by the Building Official to be subject to hazard from landslide, settlement, or slippage. For the purpose of this Section, landslide, settlement, or slippage does not include surface displacement due to earthquake faults.

. . .

110.2.3.3 When the proposed work involves the alteration or ~~minor~~ repair of existing structures and the cost of such alteration or repair does not exceed 25 percent of the current market value of the existing structure, such value to be based on assumed continuation of the established legal use. Before a permit may be issued pursuant to this section, the owner shall do all of the following:

1. If required by the Building Official, submit an engineering geology and/or soils engineering report or reports that contain(s), at a minimum, a qualitative and/or conditional finding that the proposed work complies with the provisions of Section 110.2.1 ~~of this Code~~.

. . .

110.2.3.4

. . .

This Section shall not apply to structures constructed after July 6, 1968.

. . .

110.2.3.7 When the proposed work involves a one-story, detached, light-framed structure not intended or used for human occupancy, such as a garage, carport, patio cover, deck or storage shed, accessory to a single-family residence~~-structure not intended or used for human occupancy and~~ not exceeding 400 square feet in gross floor area nor 12 feet in height. Before a permit may be issued pursuant to this Section, the owner shall do all of the following:

1. ~~When~~If required by the Building Official, submit an engineering geology and/or soils engineering report or reports that contain(s), at a minimum, a qualitative and/or conditional finding that the proposed work complies with the provisions of Section 110.2.1.

. . .

110.2.3.11 When the proposed work involves a minor alteration or repair to an existing Group R-3 Occupancy building and/or its accessory structures. Minor alterations and repairs shall include the following:

1. Roof mount photovoltaic solar systems that impose no more than 5 percent gravity load increase to the existing building.

2. Ground mount photovoltaic solar systems.

3. Recovering and reroofings.

4. New and replacement mechanical and plumbing equipment.

5. Window change-outs.

6. Similar work as determined by the Building Official.

. . .

110.4 Methane Gas Hazards.

. . .

Exceptions:

1. When approved by the Building Official, mitigation of methane gas hazards shall not be required for additions or alterations to existing buildings or structures located no closer than 200 feet (60.96 m) to active, abandoned or idle oil or gas well(s).

2. Grading permits may be issued when the proposed work is necessary to mitigate the methane gas hazard.

. . .

SECTION 113 EARTHQUAKE FAULTS

. . .

113.5 Construction Limitations.

. . .

The results of the investigation, conclusions and recommendations shall be presented in a geology report prepared by a professional geologist as defined by Section 113.3. The report shall comply with the guidelines presented in Note 49 prepared by the California Department of Conservation, Geological Survey.

The Building Official may waive the requirements for an active earthquake fault investigation for additions to existing one- or two-family dwelling units when all of the following conditions are met:

1. There is no increase in the number of bedrooms or bedroom equivalent rooms in the dwelling unit;

2. The addition does not increase the permitted gross floor area of the structure by more than 20 percent as it existed on January 1, 2017, or 400 square feet, whichever is less;

3. The Building Official has determined that the addition is not located over or upon the trace of a known active earthquake fault as shown on the aforementioned maps; and

4. The owner shall record in the office of the Department of Registrar-Recorder a statement acknowledging that the owner is aware that the records of the Building Official indicate that the property is potentially subject to a hazard from a known active earthquake fault. The owner shall also record in the office of the Department of Registrar-Recorder an agreement relieving the County and all officers and employees thereof of any liability for any damage or loss which may result from the issuance of such a permit. This agreement shall provide that it is binding on all successors in interest of the owner and shall continue in effect until the Building Official records in the office of the Department of Registrar-Recorder a statement that the Building Official has determined that a hazard from a known active earthquake fault no longer exists.

. . .

TABLE 1-C
GRADING PLAN CHECK FEES

BASED ON VOLUME OF MATERIALS HANDLED	FEE
1-1,000 yd^3 (1 m^3 – 764.6 m^3)	$302.00 plus $102.70/ 100 yd^3 (76.5 m^3) or fraction thereof in excess of 100 yd^3 (76.5 m^3)
1,001-10,000 yd^3 (765.3 m^3 - 7645.5 m^3)	$1,229.30 plus $85.20/1,000 yd^3 (764.6 m^3) or fraction thereof in excess of 1,000 yd^3 (764.6 m^3)
10,001-100,000 yd^3 (7646.3 m^3 - 76 455 m^3)	$1,996.40 plus $50.30/1,000 yd^3 (764.6 m^3) or fraction thereof in excess of 10,000 yd^3 (7645.5 m^3)
100,001-500,000 yd^3 (76 456 m^3 – 382 275 m^3)	$6,534.80 plus $139.10/10,000 yd^3 (764.6 m^3) or fraction thereof in excess of 100,000 yd^3 (76 455 m^3)
500,001 yd^3 (~~76 456~~ 382 278 m^3) or more	$12,097.40 plus $126.40/10,000 yd^3 (764.6 m^3) or fraction thereof in excess of 500,000 yd^3 (382 275 m^3)

. . .

TABLE 1-F
CODE ENFORCEMENT FEES

SERVICE	FEE
1 - Investigation and Processing	$343.50
2 - Preparation of job specifications	$460.00
3 - Board of Supervisors or City Council approval	$233.50
4 - Contract cancellation	$239.80
5 - Contract performance inspection	$183.70
6 - For processing a 45-day letter	$465.70
7 - For processing a Notice of Violation	$370.10
8 - For processing a Rescission of Notice of Violation	$318.40
9 - Billing	$137.20
10 -Record ~~Special Assessment~~ Lien	$137.20
11 -Filing of Special Assessment	$232.70

SECTION 3. Chapter 7A is hereby amended to read as follows:

CHAPTER 7A [SFM]

MATERIALS AND CONSTRUCTION METHODS FOR EXTERIOR WILDFIRE EXPOSURE

Note: This Chapter has been amended by Los Angeles County and is applicable to all occupancy groups.

SECTION 4. Section 701A.1 is hereby amended to read as follows:

701A.1 Scope.

This ~~c~~Chapter applies to building materials, systems, and/or assemblies used in the exterior design and construction of new buildings ~~located~~, and to additions, alterations, or repairs made to existing buildings, erected, constructed, or moved within a Wildland-Urban Interface Fire Area as defined in Section 702A.

SECTION 5. Section 701A.3 is hereby amended to read as follows:

701A.3 Application.

New buildings, and any additions, alterations, or repairs made to existing buildings located in or moved within any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area designated by the ~~enforcing agency~~Los Angeles County Fire Department constructed after the application date shall comply with the provisions of this ~~c~~Chapter.

Exceptions:

. . .

~~4. Additions to and remodels of buildings originally constructed prior to the applicable application date.~~

SECTION 6. Section 701A.3.1 is hereby amended to read as follows:

701A.3.1 Application date and where required.

New buildings for which an application for a building permit is submitted on or after July 1, 2008, and any additions, alterations, or repairs made to existing buildings for which an application for a building permit is submitted on or after January 1, 2017, located in any Fire Hazard Severity Zone or Wildland Interface Fire Area shall comply with all ~~s~~Sections of this ~~c~~Chapter, including all of the following areas:

. . .

Exceptions:

1. ~~New b~~Buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all ~~s~~Sections of this ~~c~~Chapter.

2. ~~New b~~Buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland Interface Fire Area designated by cities and other local agencies for which an application for a building permit is submitted on or after December 1, 2005, but prior to July 1, 2008, shall only comply with the following ~~s~~Sections of this ~~c~~Chapter:

. . .

SECTION 7. Section 701A.4 is hereby amended to read as follows:

701A.4 Inspection and certification.

Building permit applications and final completion approvals for buildings within the scope and application of this ~~c~~Chapter shall comply with the following:

1. Building permit issuance. The ~~local b~~Building ~~o~~Official shall, prior to construction, provide the owner or applicant a certification that the building as proposed to be built complies with all applicable state and local building standards, including those for materials and construction methods for wildfire exposure as described in this ~~c~~Chapter. Issuance of a building permit by the ~~local b~~Building ~~o~~Official for the proposed building shall be considered as complying with this ~~s~~Section.

2. Building permit final. The ~~local b~~Building ~~o~~Official shall, upon completion of construction, provide the owner or applicant with a copy of the final inspection report that demonstrates the building was constructed in compliance with all applicable state and local building standards, including those for materials and construction methods for wildfire exposure as described in this ~~c~~Chapter. Issuance of a certificate of occupancy by the ~~local b~~Building ~~o~~Official for the proposed building shall be considered as complying with this ~~s~~Section.

SECTION 8. Section 702A is hereby amended to read as follows:

702A DEFINITIONS

. . .

FIRE PROTECTION PLAN is a document prepared for a specific project or development proposed for a Wildland-Urban Interface Fire Area. It describes ways to minimize and mitigate potential for loss from wildfire exposure.

The Fire Protection Plan shall be in accordance with this ~~e~~Chapter and ~~the California~~Title 32 – Fire Code – of the Los Angeles County Code, Chapter 49. When required by the enforcing agency for the purposes of granting modifications, a fire protection plan shall be submitted. ~~Only locally adopted ordinances that have been filed with the California Building Standards Commission or the Department of Housing and Community Development in accordance with Section 1.1.8 shall apply.~~

FIRE HAZARD SEVERITY ZONES are geographical areas designated pursuant to California Public Resources Codes Sections 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code Sections 51175 through 51189. See ~~California~~Title 32 – Fire Code – of the Los Angeles County Code, Chapter 49.

. . .

WILDLAND-URBAN INTERFACE FIRE AREA is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the ~~enforcing agency~~Los Angeles County Fire Department to be at a significant risk from wildfires.

SECTION 9. Section 703A.2 is hereby amended to read as follows:

703A.2 Qualification by testing.

Material and material assemblies tested in accordance with the requirements of Section 703A shall be accepted for use when the results and conditions of those tests

are met. Product evaluation testing of material and material assemblies shall be approved or listed by the State Fire Marshal, the Building Official, or identified in a current report issued by an approved agency.

SECTION 10. Section 703A.3 is hereby amended to read as follows:

703A.3 Approved agency.

Product evaluation testing shall be performed by an approved agency as defined in Section 1702. The scope of accreditation for the approved agency shall include building product compliance with this ~~c~~Code.

SECTION 11. Section 703A.5.2 is hereby amended to read as follows:

703A.5.2 Weathering.

Fire-retardant-treated wood ~~and fire-retardant-treated wood shingles and shakes~~ shall meet the fire test performance requirements of this ~~c~~Chapter after being subjected to the weathering conditions contained in the following standards, as applicable to the materials and the conditions of use.

SECTION 12. Section 703A.5.2.2 is hereby deleted in its entirety.

~~**703A.5.2.2 Fire-retardant-treated wood shingles and shakes.**~~

~~Fire-retardant-treated wood shingles and shakes shall be approved and listed by the State Fire Marshal in accordance with Section 208(c), Title 19 California Code of Regulations.~~

SECTION 13. Section 703A.6 is hereby amended to read as follows:

703A.6 Alternates for materials, design, tests, and methods of construction.

The enforcing agency is permitted to modify the provisions of this ~~c~~Chapter for site-specific conditions in accordance with Chapter 1, Section ~~1.11.2.4~~104.2.7. When required by the ~~enforcing agency~~Building Official for the purposes of granting modifications, a fire protection plan shall be submitted in accordance with ~~the California~~Title 32 – Fire Code – of the Los Angeles County Code, Chapter 49.

SECTION 14. Section 704A.3 is hereby amended to read as follows:

704A.3 Alternative methods for determining ignition-resistant material.

. . .

~~3. Fire-retardant-treated wood shingles and shakes. Fire-retardant-treated wood shingles and shakes, as defined in section 1505.6 and listed by State Fire Marshal for use as "Class B" roof covering, shall be accepted as an ignition-resistant wall covering material when installed over solid sheathing.~~

SECTION 15. Section 705A.2 is hereby amended to read as follows:

705A.2 Roof coverings.

Roof coverings shall be Class A as specified in Section 1505.2. Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to prevent the intrusion of flames and embers, be firestopped with approved materials or have one layer of minimum 72 pound (32.4 kg) mineral-surfaced non-perforated cap sheet complying with ASTM D3909 installed over the combustible decking. Wood shingles and wood shakes are prohibited in any Fire Hazard Severity Zones regardless of classification.

SECTION 16. Section 706A.3 is hereby amended to read as follows:

706A.3 Ventilation openings on the underside of eaves and cornices.

. . .

Exceptions:

. . .

2. The ~~enforcing agency~~Building Official may accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers.

. . .

SECTION 17. Section 710A.3.2 is hereby amended to read as follows:

710A.3.2

When required by the ~~enforcing agency~~Building Official, detached accessory structures within 50 feet of an applicable building shall comply with the requirements of this ~~s~~Section.

SECTION 18. Section 710A.4 is hereby amended to read as follows:

710A.4 Requirements.

When required by the ~~enforcing agency~~Building Official, accessory structures shall be constructed of noncombustible or ignition-resistant materials.

SECTION 19. Section 1030.4 is hereby amended to read as follows:

1030.4 Operational constraints.

. . .

Where security bars (burglar bars) are installed on emergency egress and rescue windows or doors, ~~on or after July 1, 2000,~~ such devices shall comply with California Building Standards Code, Part 12, Chapter 12-3 and other applicable provisions of Part 2.

. . .

SECTION 20. Section 1507.3.1 is hereby amended to read as follows:

1507.3.1 Deck requirements.

Concrete and clay tile shall be installed only over solid ~~sheathing or spaced~~ structural sheathing boards.

SECTION 21. Table 1507.3.7 is hereby amended to read as follows:

TABLE 1507.3.7

CLAY AND CONCRETE TILE ATTACHMENT [a, b, c]

GENERAL – CLAY OR CONCRETE ROOF TILE				
Maximum Nominal Design Wind Speed, V_{asd} [f] (mph)	**Mean roof height (feet)**	**Roof slope up to <3:12**	**Roof slope 3:12 and over**	
85	0 - 60	*Minimum slope: 2.5:12*	Two fasteners per tile. ~~Only one fastener on slopes of 7:12 and less for tiles with installed weight exceeding 7.5 lbs/sq. ft. having a width no greater than 16 inches.~~	
100	0 - 40	~~One fastener per tile. Flat tile without vertical laps,~~ Two fasteners per tile.		
. . .	. . .	. . .		
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS [d, e] (Installations on ~~spaced/~~solid sheathing with battens ~~or spaced sheathing~~)				
Maximum Nominal Design Wind Speed, V_{asd} [f] (mph)	**Mean roof height (feet)**	**Roof slope up to <5:12**	**Roof slope 5:12<12:12**	**Roof slope 12:12 and over**
85	0 - 60	~~Fasteners are not required.~~	One fastener per tile	One

100	0 - 40	~~Tiles with installed weight less than 9 lbs/sq. ft. require a minimum of o~~ Minimum slope is 4:12. ~~O~~ One fastener per tile.	~~every other row. All perimeter tiles require one fastener~~. Tiles with installed weight less than 9 lbs/sq.ft. require a minimum of one fastener per tile.	fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.
. . .	. . .	. . .		
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS (Installations on solid sheathing without battens)				
Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)	**Mean roof height (feet)**	**~~All~~ Minimum roof slopes 4 units vertical in 12 units horizontal Maximum slope 7 units vertical in 12 units horizontal**		
. . .	. . .	. . .		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m^2.

[a] Minimum fastener size. Hot dipped galvanized ring shank or other ~~C~~corrosion-resistant nails not less than No. 11 gage with $^5/_{16}$-inch head. Fasteners shall be long enough to penetrate into the sheathing ¾ inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch and shall be copper, brass or stainless steel.

. . .

SECTION 22. Section 1613.7 is hereby added to read as follows:

1613.7 Modifications to ASCE 7

The text of ASCE 7 shall be modified as indicated in Sections 1613.7.1 through 1613.7.4.

1613.7.1 ASCE 7, 12.12.3.

Modify ASCE 7 Equation 12.12-1 of Section 12.12.3 to read as follows:

$$\delta_M = \frac{C_d \delta_{max}}{~~I_e~~}$$

(Equation 12.12-1)

1613.7.2 ASCE 7, 12.2.3.1, Exception 3.

Modify ASCE 7, Section 12.2.3.1, Exception 3 to read as follows:

3. Detached one- and two-family dwellings up to two stories in height of light frame construction.

1613.7.3 ASCE 7, Section 12.11.2.2.3.

Modify ASCE 7, Section 12.11.2.2.3, to read as follows:

12.11.2.2.3 Wood diaphragms.

In wood diaphragms, the continuous ties shall be in addition to the diaphragm sheathing. Anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal nor shall wood ledgers or framing be used in cross-grain bending or cross-grain tension. The diaphragm sheathing shall not be considered effective as providing ties or struts required by this Section.

For structures assigned to Seismic Design Category D, E, or F, wood diaphragms supporting concrete or masonry walls shall comply with the following:

1. The spacing of continuous ties shall not exceed 40 feet. Added chords of diaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous crossties.

2. The maximum diaphragm shear used to determine the depth of the subdiaphragm shall not exceed 75 percent of the maximum diaphragm shear.

1613.7.4 ASCE 7, Section 12.8.1.3.

Modify ASCE 7, Section 12.8.1.3, to read as follows:

12.8.1.3 Maximum S_{DS} Value in Determination of C_s and E_v.

The value of C_s and E_v are permitted to be calculated using a value of S_{DS} equal to 1.0 but not less than 70% of S_{DS} as defined in Section 11.4.4, provided that all of the following criteria are met:

1. The structure does not have irregularities, as defined in Section 12.3.2;

2. The structure does not exceed five stories above the lower of the base or grade plane as defined in Section 11.2, and, where present, each mezzanine level shall be considered a story for the purpose of this limit;

3. The structure has a fundamental period, T, that does not exceed 0.5 seconds, as determined using Section 12.8.2;

4. The structure meets the requirements necessary for the redundancy factor, ρ, to be permitted to be taken as 1.0, in accordance with Section 12.3.4.2;

5. The site soil properties are not classified as Site Classes E or F, as defined in Section 11.4.2; and

6. The structure is classified as Risk Category I or II, as defined in Section 1.5.1.

SECTION 23. Section 1613.8 is hereby added to read as follows:

1613.8 Seismic design provisions for hillside buildings.

1613.8.1 Purpose.

The purpose of this Section is to establish minimum regulations for the design and construction of new buildings and additions to existing buildings when constructing such buildings on or into slopes steeper than one unit vertical in three units horizontal

(33.3 percent). These regulations establish minimum standards for seismic force resistance to reduce the risk of injury or loss of life in the event of earthquakes.

1613.8.2 Scope.

The provisions of this Section shall apply to the design of the lateral-force-resisting system for hillside buildings at and below the base level diaphragm. The design of the lateral-force-resisting system above the base level diaphragm shall be in accordance with the provisions for seismic and wind design as required elsewhere in this Chapter.

Exceptions:

1. Non-habitable accessory buildings and decks not supporting or supported from the main building are exempt from these regulations.

2. Additions to existing buildings that do not exceed 10 percent of the existing floor area provided that the addition is being supported completely by the existing foundation.

1613.8.3 Definitions.

For the purposes of this Section certain terms are defined as follows:

BASE LEVEL DIAPHRAGM is the floor at, or closest to, the top of the highest level of the foundation.

DIAPHRAGM ANCHORS are assemblies that connect a diaphragm to the adjacent foundation at the uphill diaphragm edge.

DOWNHILL DIRECTION is the descending direction of the slope approximately perpendicular to the slope contours.

FOUNDATION is concrete or masonry which supports a building, including footings, stem walls, retaining walls, and grade beams.

FOUNDATION EXTENDING IN THE DOWNHILL DIRECTION is a foundation running downhill and approximately perpendicular to the uphill foundation.

HILLSIDE BUILDING is any building or portion thereof constructed on or into a slope steeper than one unit vertical in three units horizontal (33.3 percent). If only a portion of the building is supported on or into the slope, these regulations apply to the entire building.

PRIMARY ANCHORS are diaphragm anchors designed for and providing a direct connection as described in Sections 1613.8.5 and 1613.8.7.3 between the diaphragm and the uphill foundation.

SECONDARY ANCHORS are diaphragm anchors designed for and providing a redundant diaphragm to foundation connection, as described in Sections 1613.8.6 and 1613.8.7.4.

UPHILL DIAPHRAGM EDGE is the edge of the diaphragm adjacent and closest to the highest ground level at the perimeter of the diaphragm.

UPHILL FOUNDATION is the foundation parallel and closest to the uphill diaphragm edge.

1613.8.4 Analysis and design.

1613.8.4.1 General.

Every hillside building within the scope of this Section shall be analyzed, designed, and constructed in accordance with the provisions of this Chapter. When the

code-prescribed wind design produces greater effects, the wind design shall govern, but detailing requirements and limitations prescribed in this Section and all referenced Sections shall be followed.

1613.8.4.2 Base level diaphragm-downhill direction.

The following provisions shall apply to the seismic analysis and design of the connections for the base level diaphragm in the downhill direction.

1613.8.4.2.1 Base for lateral force design defined.

For seismic forces acting in the downhill direction, the base of the building shall be the floor at, or closest to, the top of the highest level of the foundation.

1613.8.4.2.2 Base shear.

In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 5 for bearing wall and building frame systems. The total base shear shall include the forces tributary to the base level diaphragm including forces from the base level diaphragm.

1613.8.5 Base shear resistance-primary anchors.

1613.8.5.1 General.

The base shear in the downhill direction shall be resisted through primary anchors from diaphragm struts provided in the base level diaphragm to the foundation.

1613.8.5.2 Location of primary anchors.

A primary anchor and diaphragm strut shall be provided in line with each foundation extending in the downhill direction. Primary anchors and diaphragm struts shall also be provided where interior vertical lateral-force-resisting elements

occur above and in contact with the base level diaphragm. The spacing of primary anchors and diaphragm struts or collectors shall in no case exceed 30 feet (9,144 mm).

1613.8.5.3 Design of primary anchors and diaphragm struts.

Primary anchors and diaphragm struts shall be designed in accordance with the requirements of Section 1613.8.8.

1613.8.5.4 Limitations.

The following lateral-force-resisting elements shall not be designed to resist seismic forces below the base level diaphragm in the downhill direction:

1. Wood structural panel wall sheathing;
2. Cement plaster and lath;
3. Gypsum wallboard; and
4. Tension-only braced frames.

Braced frames designed in accordance with the requirements of Section 2205.2.2 may be used to transfer forces from the primary anchors and diaphragm struts to the foundation provided lateral forces do not induce flexural stresses in any member of the frame or in the diaphragm struts. Deflections of frames shall account for the variation in slope of diagonal members when the frame is not rectangular.

1613.8.6 Base shear resistance-secondary anchors.

1613.8.6.1 General.

In addition to the primary anchors required by Section 1613.8.5, the base shear

in the downhill direction shall be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in the base level diaphragm.

Exception: Secondary anchors are not required where foundations extending in the downhill direction spaced at not more than 30 feet (9,144 mm) on center extend up to and are directly connected to the base level diaphragm for at least 70 percent of the diaphragm depth.

1613.8.6.2 Secondary anchor capacity and spacing.

Secondary anchors at the base level diaphragm shall be designed for a minimum force equal to the base shear, including forces tributary to the base level diaphragm, but not less than 600 pounds per lineal foot (8.76 kN/m). The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced a maximum of four feet (1,219 mm) on center.

1613.8.6.3 Design.

Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.8.8.

1613.8.7 Diaphragms below the base level-downhill direction.

The following provisions shall apply to the lateral analysis and design of the connections for all diaphragms below the base level diaphragm in the downhill direction.

1613.8.7.1 Diaphragm defined.

Every floor level below the base level diaphragm shall be designed as a diaphragm.

1613.8.7.2 Design force.

Each diaphragm below the base level diaphragm shall be designed for all tributary loads at that level using a minimum seismic force factor not less than the base shear coefficient.

1613.8.7.3 Design force-resistance-primary anchors.

The design force described in Section 1613.8.7.2 shall be resisted through primary anchors from diaphragm struts provided in each diaphragm to the foundation. Primary anchors shall be provided and designed in accordance with the requirements and limitations of Section 1613.8.5.

1613.8.7.4 Design force-resistance-secondary anchors.

1613.8.7.4.1 General.

In addition to the primary anchors required in Section 1613.8.7.3, the design force in the downhill direction shall be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in each diaphragm below the base level.

Exception: Secondary anchors are not required where foundations extending in the downhill direction, spaced at not more than 30 feet (9,144 mm) on center, extend up to and are directly connected to each diaphragm below the base level for at least 70 percent of the diaphragm depth.

1613.8.7.4.2 Secondary anchor capacity.

Secondary anchors at each diaphragm below the base level diaphragm shall be designed for a minimum force equal to the design force but not less than 300 pounds per lineal foot (4.38 kN/m). The secondary anchors shall be uniformly distributed along

the uphill diaphragm edge and shall be spaced a maximum of four feet (1,219 mm) on center.

1613.8.7.4.3 Design.

Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.8.8.

1613.8.8 Primary and secondary anchorage and diaphragm strut design.

Primary and secondary anchors and diaphragm struts shall be designed in accordance with the following provisions:

1. Fasteners. All bolted fasteners used to develop connections to wood members shall be provided with square plate washers at all bolt heads and nuts. Washers shall be minimum 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. Nuts shall be tightened to finger tight plus one half (1/2) wrench turn prior to covering the framing.

2. Fastening. The diaphragm to foundation anchorage shall not be accomplished by the use of toenailing, nails subject to withdrawal, or wood in cross-grain bending or cross-grain tension.

3. Size of Wood Members. Wood diaphragm struts, collectors, and other wood members connected to primary anchors shall not be less than three-inch (76 mm) nominal width. The effects of eccentricity on wood members shall be evaluated as required per Item 9.

4. Design. Primary and secondary anchorage, including diaphragm struts, splices, and collectors shall be designed for 125 percent of the tributary force.

5. Allowable Stress Increase. The one-third allowable stress increase permitted under Section 1605.3.2 shall not be taken when the working (allowable) stress design method is used.

6. Steel Element of Structural Wall Anchorage System. The strength design forces for steel elements of the structural wall anchorage system, with the exception of anchor bolts and reinforcing steel, shall be increased by 1.4 times the forces otherwise required.

7. Primary Anchors. The load path for primary anchors and diaphragm struts shall be fully developed into the diaphragm and into the foundation. The foundation must be shown to be adequate to resist the concentrated loads from the primary anchors.

8. Secondary Anchors. The load path for secondary anchors and diaphragm struts shall be fully developed in the diaphragm but need not be developed beyond the connection to the foundation.

9. Symmetry. All lateral force foundation anchorage and diaphragm strut connections shall be symmetrical. Eccentric connections may be permitted when demonstrated by calculation or tests that all components of force have been provided for in the structural analysis or tests.

10. Wood Ledgers. Wood ledgers shall not be used to resist cross-grain bending or cross-grain tension.

1613.8.9 Lateral-force-resisting elements normal to the downhill direction.

1613.8.9.1 General.

In the direction normal to the downhill direction, lateral-force-resisting elements shall be designed in accordance with the requirements of this Section.

1613.8.9.2 Base shear.

In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 5 for bearing wall and building frame systems.

1613.8.9.3 Vertical distribution of seismic forces.

For seismic forces acting normal to the downhill direction the distribution of seismic forces over the height of the building using Section 12.8.3 of ASCE 7 shall be determined using the height measured from the top of the lowest level of the building foundation.

1613.8.9.4 Drift limitations.

The story drift below the base level diaphragm shall not exceed 0.007 times the story height at strength design force level. The total drift from the base level diaphragm to the top of the foundation shall not exceed 3/4 inch (19 mm). Where the story height or the height from the base level diaphragm to the top of the foundation varies because of a stepped footing or story offset, the height shall be measured from the average height of the top of the foundation. The story drift shall not be reduced by the effect of horizontal diaphragm stiffness.

1613.8.9.5 Distribution of lateral forces.

1613.8.9.5.1 General.

The design lateral force shall be distributed to lateral-force-resisting elements of varying heights in accordance with the stiffness of each individual element.

1613.8.9.5.2 Wood structural panel sheathed walls.

The stiffness of a stepped wood structural panel shear wall may be determined by dividing the wall into adjacent rectangular elements, subject to the same top of wall deflection. Deflections of shear walls may be estimated by AWC SDPWS Section 4.3.2. Sheathing and fastening requirements for the stiffest section shall be used for the entire wall. Each section of wall shall be anchored for shear and uplift at each step. The minimum horizontal length of a step shall be 8 feet (2438 mm) and the maximum vertical height of a step shall be 2 feet, 8 inches (813 mm).

1613.8.9.5.3 Reinforced concrete or masonry shear walls.

Reinforced concrete or masonry shear walls shall have forces distributed in proportion to the rigidity of each section of the wall.

1613.8.9.6 Limitations.

The following lateral force-resisting-elements shall not be designed to resist lateral forces below the base level diaphragm in the direction normal to the downhill direction:

1. Cement plaster and lath;
2. Gypsum wallboard; and
3. Tension-only braced frames.

Braced frames designed in accordance with the requirements of Section 2205.2.1.2 of this Code may be designed as lateral-force-resisting elements in the direction normal to the downhill direction, provided lateral forces do not induce flexural stresses in any member of the frame. Deflections of frames shall account for the variation in slope of diagonal members when the frame is not rectangular.

1613.8.10 Specific design provisions.

1613.8.10.1 Footings and grade beams.

All footings and grade beams shall comply with the following:

1. Grade beams shall extend at least 12 inches (305 mm) below the lowest adjacent grade and provide a minimum 24-inch (610 mm) distance horizontally from the bottom outside face of the grade beam to the face of the descending slope.

2. Continuous footings shall be reinforced with at least two No. 4 reinforcing bars at the top and two No. 4 reinforcing bars at the bottom.

3. All main footing and grade beam reinforcement steel shall be bent into the intersecting footing and fully developed around each corner and intersection.

4. All concrete stem walls shall extend from the foundation and be reinforced as required for concrete or masonry walls.

1613.8.10.2 Protection against decay and termites.

All wood to earth separation shall comply with the following:

1. Where a footing or grade beam extends across a descending slope, the stem wall, grade beam, or footing shall extend up to a minimum 18 inches (457 mm) above the highest adjacent grade.

Exception: At paved garage and doorway entrances to the building, the stem wall need only extend to the finished concrete slab, provided the wood framing is protected with a moisture proof barrier.

2. Wood ledgers supporting a vertical load of more than 100 pounds per lineal foot (1.46 kN/m) and located within 48 inches (1219 mm) of adjacent grade are prohibited. Galvanized steel ledgers and anchor bolts, with or without wood nailers, or treated or decay resistant sill plates supported on a concrete or masonry seat, may be used.

1613.8.10.3 Sill plates.

All sill plates and anchorage shall comply with the following:

1. All wood framed walls, including nonbearing walls, when resting on a footing, foundation, or grade beam stem wall, shall be supported on wood sill plates bearing on a level surface.

2. Power-driven fasteners shall not be used to anchor sill plates except at interior nonbearing walls not designed as shear walls.

1613.8.10.4 Column base plate anchorage.

The base of isolated wood posts (not framed into a stud wall) supporting a vertical load of 4000 pounds (17.8 kN) or more and the base plate for a steel column shall comply with the following:

1. When the post or column is supported on a pedestal extending above the top of a footing or grade beam, the pedestal shall be designed and reinforced as required for concrete or masonry columns. The pedestal shall be reinforced with a

minimum of four No. 4 bars extending to the bottom of the footing or grade beam. The top of exterior pedestals shall be sloped for positive drainage.

2. The base plate anchor bolts or the embedded portion of the post base, and the vertical reinforcing bars for the pedestal, shall be confined with two No. 4 or three No. 3 ties within the top five inches (127 mm) of the concrete or masonry pedestal. The base plate anchor bolts shall be embedded a minimum of 20 bolt diameters into the concrete or masonry pedestal. The base plate anchor bolts and post bases shall be galvanized and each anchor bolt shall have at least two galvanized nuts above the base plate.

1613.8.10.5 Steel beam to column supports.

All steel beam to column supports shall be positively braced in each direction. Steel beams shall have stiffener plates installed on each side of the beam web at the column. The stiffener plates shall be welded to each beam flange and the beam web. Each brace connection or structural member shall consist of at least two 5/8 inch (15.9 mm) diameter machine bolts.

SECTION 24. Section 1704.2.3 is hereby amended to read as follows:

1704.2.3 Statement of special inspections.

The applicant shall submit a statement of *special inspections* in accordance with Section ~~107.1~~106.4, as a condition for permit issuance. This statement shall be in accordance with Section 1704.3.

. . .

SECTION 25. Section 1704.6 is hereby amended to read as follows:

1704.6 Structural observations.

Where required by the provisions of Section 1704.6.1 or 1704.6.2, the owner or the owner's authorized agent shall employ a ~~registered design professional~~structural observer to perform structural observations. Structural observation does not include or waive the responsibility for the inspections in Section ~~110~~108 or the special inspections in Section 1705 or other ~~s~~Sections of this ~~c~~Code. The structural observer shall be one of the following individuals:

1. The registered design professional responsible for the structural design, or

2. A registered design professional designated by the registered design professional responsible for the structural design.

Prior to the commencement of observations, the structural observer shall submit to the ~~b~~Building ~~o~~Official a written statement identifying the frequency and extent of structural observations.

~~At the conclusion of the work included in the permit, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.~~

The owner or owner's authorized agent shall coordinate and call a preconstruction meeting between the structural observer, contractors, affected subcontractors, and special inspectors. The structural observer shall preside over the meeting. The purpose of the meeting shall be to identify the major structural elements and connections that affect the vertical and lateral load resisting systems of the

structure and to review scheduling of the required observations. A record of the meeting shall be included in the report submitted to the Building Official.

Observed deficiencies shall be reported in writing to the owner or owner's authorized agent, special inspector, contractor, and the Building Official. Upon the form prescribed by the Building Official, the structural observer shall submit to the Building Official a written statement at each significant construction stage stating that the site visits have been made and identifying any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved. A final report by the structural observer which states that all observed deficiencies have been resolved is required before acceptance of the work by the Building Official.

SECTION 26. Section 1704.6.1 is hereby amended to read as follows:

1704.6.1 Structural observations for seismic resistance.

. . .

3. The structure ~~is assigned to Seismic Design Category E,~~ is classified as Risk Category I or II, and ~~is greater than two stories one stories above grade plane~~a lateral design is required for the structure or portion thereof.

Exception: One-story wood framed Group R-3 and Group U Occupancies less than 2,000 square feet in area, provided the adjacent grade is not steeper than 1 unit vertical in 10 units horizontal (10 percent sloped), assigned to Seismic Design Category D.

. . .

SECTION 27. Section 1705.3 is hereby amended to read as follows:

1705.3 Concrete Construction.

Special inspections and tests of concrete construction shall be performed in accordance with this ~~s~~Section and Table 1705.3.

Exception: Special inspections and tests shall not be required for:

1. Isolated spread concrete footings of buildings three stories or less above grade plane that are fully supported on earth or rock where the structural design of the footing is based on a specified compressive strength (f'c) not greater than 2,500 pounds per square inch (psi) (17.2 Mpa) regardless of the compressive strength specified in the construction documents or used in the footing construction.

. . .

~~4. Concrete foundation walls constructed in accordance with Table 1807.1.6.2.~~

~~5~~4. Concrete patios, ~~driveways~~ and sidewalks, on grade.

SECTION 28. Section 1705.12 is hereby amended to read as follows:

1705.12 Special inspections for seismic resistance.

. . .

Exception: The special inspections specified in Sections 1705.12.1 through 1705.12.9 are not required for structures designed and constructed in accordance with one of the following:

. . .

3. The structure is a detached one- or two-family dwelling not exceeding two stories above grade plane, provided the structure is not assigned to Seismic Design Category D, E, or F and does not have any of the following horizontal or vertical irregularities in accordance with Section 12.3 of ASCE 7:

. . .

SECTION 29. Section 1807.1.4 is hereby amended to read as follows:

1807.1.4 Permanent wood foundations systems.

Permanent wood foundation systems shall be designed and installed in accordance with AWC PWF. Lumber and plywood shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B and Section 5.2) and shall be identified in accordance with Section 2303.1.9.1. Permanent wood foundation systems shall not be used for structures assigned to Seismic Design Category D, E, or F.

SECTION 30. Section 1807.1.6 is hereby amended to read as follows:

1807.1.6 Prescriptive design of concrete and masonry foundation walls.

Concrete and masonry foundation walls that are laterally supported at the top and bottom shall be permitted to be designed and constructed in accordance with this ~~s~~Section. Prescriptive design of foundation walls shall not be used for structures assigned to Seismic Design Category D, E, or F.

SECTION 31. Section 1809.3 is hereby amended to read as follows:

1809.3 Stepped footings.

. . .

For structures assigned to Seismic Design Category D, E, or F, the stepping requirement shall also apply to the top surface of grade beams supporting walls. Footings shall be reinforced with four No. 4 reinforcing bars. Two bars shall be located at the top and bottom of the footings as shown in Figure 1809.3.

SECTION 32. Figure 1809.3 is hereby added to read as follows:

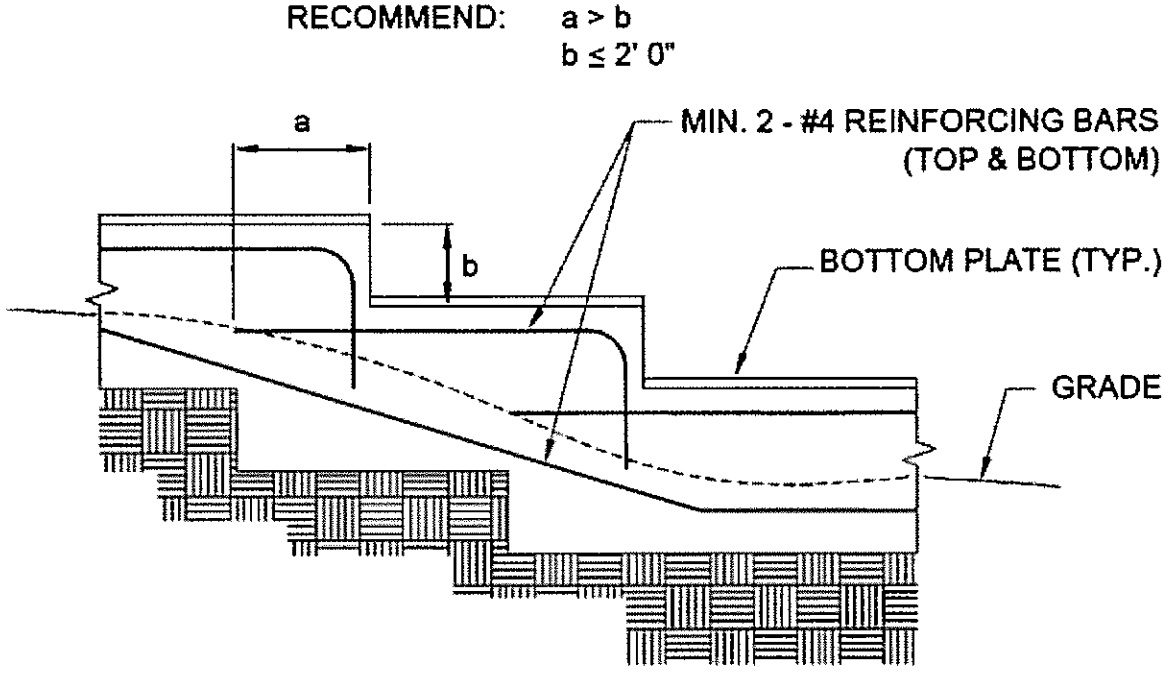


FIGURE 1809.3

STEPPED FOOTING

SECTION 33. Section 1809.7 is hereby amended to read as follows:

1809.7 Prescriptive footings for light-frame construction.

Where a specific design is not provided, concrete or masonry-unit footings

supporting walls of light-frame construction shall be permitted to be designed in accordance with Table 1809.7. Prescriptive footings in Table 1809.7 shall not exceed one story above grade plane for structures assigned to Seismic Design Category D, E, or F.

SECTION 34. Table 1809.7 is hereby amended to read as follows:

TABLE 1809.7

PRESCRIPTIVE FOOTINGS SUPPORTING WALLS OF LIGHT-FRAME CONSTRUCTION [a, b, c, d, e]

NUMBER OF FLOORS SUPPORTED BY THE FOOTING[f]	WIDTH OF FOOTING (inches)	THICKNESS OF FOOTING (inches)
1	12	6
2	15	6
3	18	8[g]

. . .

c. ~~Interior stud-bearing walls shall be permitted to be supported by isolated footings. The footing width and length shall be twice the width shown in this table, and footings shall be spaced not more than 6 feet on center.~~[Reserved].

. . .

~~g. Plain concrete footings for Group R-3 occupancies shall be permitted to be 6 inches thick.~~

SECTION 35. Section 1809.12 is hereby amended to read as follows:

1809.12 Timber footings.

Timber footings shall be permitted for buildings of Type V construction and as otherwise approved by the ~~b~~Building ~~o~~Official. Such footings shall be treated in

accordance with AWPA U1 (Commodity Specification A, Use Category 4B). Treated timbers are not required where placed entirely below permanent water level, or where used as capping for wood piles that project above the water level over submerged or marsh lands. The compressive stresses perpendicular to grain in untreated timber footings supported upon treated piles shall not exceed 70 percent of the allowable stresses for the species and grade of timber as specified in the ~~AF&PA~~AWC NDS. Timber footings shall not be used in structures assigned to Seismic Design Category D, E, or F.

SECTION 36 Section 1810.3.2.4 is hereby amended to read as follows:

1810.3.2.4 Timber.

Timber deep foundation elements shall be designed as piles or poles in accordance with ~~AF&PA~~AWC NDS. Round timber elements shall conform to ASTM D25. Sawn timber elements shall conform to DOC PS-20. Timber shall not be used in structures assigned to Seismic Design Category D, E, or F.

SECTION 37. Section 1905.1 is hereby amended to read as follows:

1905.1 General.

The text of ACI 318 shall be modified as indicated in Sections 1905.1.1 through 1905.1.~~8~~11.

SECTION 38. Section 1905.1.7 is hereby amended to read as follows:

1905.1.7 ACI 318, Section 14.1.4.

Delete ACI 318, Section 14.1.4, and replace with the following:

. . .

14.1.4.1 – Structures assigned to Seismic Design Category C, D, E, or F shall not have elements of structural plain concrete, except as follows:

(a) ~~Structural plain concrete basement, foundation or other walls below the base as defined in ASCE 7 are permitted in detached one- and two-family dwellings three stories or less in height constructed with stud-bearing walls. In dwellings assigned to Seismic Design Category D or E, the height of the wall shall not exceed 8 feet (2438 mm), the thickness shall not be less than 7½ inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 14.6.1.~~Concrete used for fill with a minimum cement content of two (2) sacks of Portland cement or cementious material per cubic yard.

(b) Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

~~Exception: In detached one- and two-family dwellings three stories or less in height, the projection of the footing beyond the face of the supported member is permitted to exceed the footing thickness.~~

(c) Plain concrete footings supporting walls are permitted, provided the footings have at least two continuous longitudinal reinforcing bars. Bars shall not be smaller than No. 4 and shall have a total area of not less than 0.002 times the gross cross-sectional area of the footing. ~~For footings that exceed 8 inches (203 mm) in thickness, a~~A minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

~~*Exceptions:*~~

~~*1. In Seismic Design Categories A, B and C, d*~~*Detached one- and two-family dwellings three stories or less in height and constructed with stud-bearing walls are permitted to have plain concrete footings ~~without longitudinal reinforcement~~with at least two continuous longitudinal reinforcing bars not smaller than No. 4 and a total area of less than 0.002 times the gross cross-sectional area of the footing.*

~~*2. For foundation systems consisting of a plain concrete footing and a plain concrete stemwall, a minimum of one bar shall be provided at the top of the stemwall and at the bottom of the footing.*~~

~~*3. Where a slab on ground is cast monolithically with the footing, one No. 5 bar is permitted to be located at either the top of the slab or bottom of the footing.*~~

SECTION 39. Section 1905.1.8 is hereby amended to read as follows:

1905.1.8 ACI 318, Section 17.2.3.

These requirements shall be applicable to all buildings. Modify ACI 318 Sections 17.2.3.4.2, 17.2.3.4.3 (d) and 17.2.3.5.2 to read as follows:

. . .

SECTION 40. Section 1905.1.9 is hereby added to read as follows:

1905.1.9. ACI 318, Section 18.7.5.

Modify ACI 318, Section 18.7.5, by adding Section 18.7.5.8 and 18.7.5.9 as follows:

18.7.5.8 Where the calculated point of contraflexure is not within the middle half of the member clear height, provide transverse reinforcement as specified in ACI 318, Sections 18.7.5.1, Items (a) through (c), over the full height of the member.

18.7.5.9 At any section where the design strength, φP_n, of the column is less than the sum of the shears V_e computed in accordance with ACI 318 Sections 18.7.6.1 and 18.6.5.1 for all the beams framing into the column above the level under consideration, transverse reinforcement as specified in ACI 318 Sections 18.7.5.1 through 18.7.5.3 shall be provided. For beams framing into opposite sides of the column, the moment components may be assumed to be of opposite sign. For the determination of the design strength, φP_n, of the column, these moments may be assumed to result from the deformation of the frame in any one principal axis.

SECTION 41. Section 1905.1.10 is hereby added to read as follows:

1905.1.10. ACI 318, Section 18.10.4.

Modify ACI 318, Section 18.10.4, by adding Section 18.10.4.6 as follows:

18.10.4.6 Walls and portions of walls with $P_u > 0.35P_o$ shall not be considered to contribute to the calculated shear strength of the structure for resisting earthquake-induced forces. Such walls shall conform to the requirements of ACI 318 Section 18.14.

SECTION 42. Section 1905.1.11 is hereby added to read as follows:

1905.1.11 ACI 318, Section 18.12.6.

Modify ACI 318, by adding Section 18.12.6.2, as follows:

18.12.6.2 Collector and boundary elements in topping slabs placed over

precast floor and roof elements shall not be less than 3 inches (76 mm) or 6 d_b in thickness, where d_b is the diameter of the largest reinforcement in the topping slab.

SECTION 43. Section 2304.10.1 is hereby amended to read as follows:

2304.10.1 Fastener requirements.

Connections for wood members shall be designed in accordance with the appropriate methodology in Section 2301.2. The number and size of fasteners connecting wood members shall not be less than that set forth in Table 2304.10.1. Staple fasteners in Table 2304.10.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E, or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the Building Official.

SECTION 44. Table 2304.10.1 is hereby amended to read as follows:

TABLE 2304.10.1

FASTENING SCHEDULE[d]

. . .

d. Staples shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E, or F.

SECTION 45. Section 2304.12.5 is hereby amended to read as follows:

2304.12.5 Wood used in retaining walls and cribs.

Wood installed in retaining or crib walls shall be preservative treated in

accordance with AWPA U1 for soil and fresh water use. Wood shall not be used in retaining or crib walls for structures assigned to Seismic Design Category D, E, or F.

SECTION 46. Section 2305.4 is hereby added to read as follows:

2305.4 Quality of nails.

In Seismic Design Category D, E, or F, mechanically driven nails used in wood structural panel shear walls shall meet the same dimensions as that required for hand-driven nails, including diameter, minimum length, and minimum head diameter. Clipped head or box nails are not permitted in new construction. The allowable design value for clipped head nails in existing construction may be taken at no more than the nail-head-area ratio of that of the same size hand-driven nails.

SECTION 47. Section 2305.5 is hereby added to read as follows:

2305.5 Hold-down connectors.

In Seismic Design Category D, E or F, hold-down connectors shall be designed to resist shear wall overturning moments using 75 percent of the allowable seismic load values. Such values shall be established in a valid research report from approved sources or by accepted engineering practice and the provisions of this Code.

Exception: Values established by specialized cyclic and dynamic testing may be used when approved by the Building Official in accordance with Section 104.2.8.

Connector bolts into wood framing shall require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.229 inches by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size.

Hold-down connectors shall be tightened to finger tight plus one half (1/2) wrench turn just prior to covering the wall framing.

SECTION 48. Section 2306.2 is hereby amended to read as follows:

2306.2 Wood-frame diaphragms.

Wood-frame diaphragms shall be designed and constructed in accordance with AWC SDPWS. Where panels are fastened to framing members with staples, requirements and limitations of AWC SDPWS shall be met and the allowable shear values set forth in Table 2306.2(1) or 2306.2(2) shall only be permitted for structures assigned to Seismic Design Category A, B, or C.

Exception: Allowable shear values where panels are fastened to framing members with staples may be used if such values are substantiated by cyclic testing and approved by the Building Official.

The allowable shear values in Tables 2306.2(1) and 2306.2(2) are permitted to be increased 40 percent for wind design.

Wood structural panel diaphragms used to resist seismic forces in structures assigned to Seismic Design Category D, E or F shall be applied directly to the framing members.

Exception: Wood structural panel diaphragms are permitted to be fastened over solid lumber planking or laminated decking, provided the panel joints and lumber planking or laminated decking joints do not coincide.

SECTION 49. Section 2306.3 is hereby amended to read as follows:

2306.3 Wood-frame shear walls.

Wood-frame shear walls shall be designed and constructed in accordance with AWC SDPWS. For structures assigned to Seismic Design Category D, E, or F, application of Tables 4.3A and 4.3B of AWC SDPWS shall include the following:

1. Wood structural panel thickness for shear walls shall not be less than 3/8 inch thick and studs shall not be spaced at more than 16 inches on center.

2. The maximum nominal unit shear capacities for 3/8 inch wood structural panels resisting seismic forces in structures assigned to Seismic Design Category D, E or F is 400 pounds per linear foot (plf).

Exception: Other nominal unit shear capacities may be permitted if such values are substantiated by cyclic testing and approved by the Building Official.

3. Nails shall be placed not less than 1/2 inch from the panel edges and not less than 3/8 inch from the edge of the connecting members for shear greater than 350 plf using ASD or 500 plf using LRFD. Nails shall be placed not less than 3/8 inch from panel edges and not less than 1/4 inch from the edge of the connecting members for shears of 350 plf or less using ASD or 500 plf or less using LRFD.

4. Table 4.3B application is not allowed for structures assigned to Seismic Design Category D, E, or F.

For structures assigned to Seismic Design Category D, E, or F, application of Table 4.3C of AWC SDPWS shall not be used below the top level in a multi-level building.

Where panels are fastened to framing members with staples, requirements and limitations of AWC SDPWS shall be met and the allowable shear values set forth in Table 2306.3(1), 2306.3(2) or 2306.3(3) shall only be permitted for structures assigned to Seismic Design Category A, B, or C.

Exception: Allowable shear values where panels are fastened to framing members with staples may be used if such values are substantiated by cyclic testing and approved by the Building Official.

The allowable shear values in Tables 2306.3(1) and 2306.3(2) are permitted to be increased 40 percent for wind design. Panels complying with ANSI/APA PRP-210 shall be permitted to use design values for Plywood Siding in the AWC SDPWS.

Wood structural panel shear walls used to resist seismic forces in structures assigned to Seismic Design Category D, E, or F shall be applied directly to the framing members.

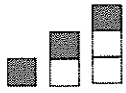
SECTION 50. Section 2307.2 is hereby added to read as follows:

2307.2 Wood-frame panel shear walls.

Wood-frame shear walls shall be designed and constructed in accordance with Section 2306.3 as applicable.

SECTION 51. Table 2308.6.1 is hereby amended to read as follows:

TABLE 2308.6.1[a]
WALL BRACING REQUIREMENTS

SEISMIC DESIGN CATEGORY	STORY CONDITION (SEE SECTION 2308.2)	MAXIMUM SPACING OF BRACED WALL LINES	BRACED PANEL LOCATION, SPACING (O.C.) AND MINIMUM PERCENTAGE (X)			MAXIMUM DISTANCE OF BRACED WALL PANELS FROM EACH END OF BRACED WALL LINE
			Bracing method[b]			
			LIB	DWB, WSP	SFB, PBS, PCP, HPS, GB[c,d]	
A and B		35′- 0″	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
		35′- 0″	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
		35′- 0″	NP	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
C		35′- 0″	NP	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
		35′- 0″	NP	Each end and ≤ 25′- 0″ o.c. (minimum 25% of wall length)[e]	Each end and ≤ 25′- 0″ o.c. (minimum 25% of wall length)[e]	12′- 6″
D and E [f, g, h]		25′- 0″	NP	$S_{DS} < 0.50$: Each end and ≤ 25′- 0″ o.c. (minimum 21% of wall length)[e]	$S_{DS} < 0.50$: Each end and ≤ 25′- 0″ o.c. (minimum 43% of wall length)[e]	8′- 0″
				$0.5 \le S_{DS} < 0.75$: Each end and ≤ 25′- 0″ o.c. (minimum 32% of wall length)[e]	$0.5 \le S_{DS} < 0.75$: Each end and ≤ 25′- 0″ o.c. (minimum 59% of wall length)[e]	
				$0.75 \le S_{DS} \le 1.00$: Each end and ≤ 25′- 0″ o.c. (minimum 37% of wall length)[e]	$0.75 \le S_{DS} \le 1.00$: Each end and ≤ 25′- 0″ o.c. (minimum 75% of wall length)	
				$S_{DS} > 1.00$: Each end and ≤ 25′- 0″ o.c. (minimum 48% of wall length)[e]	$S_{DS} > 1.00$: Each end and ≤ 25′- 0″ o.c. (minimum 100% of wall length)[e]	

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

NP = Not Permitted.

a. This table specifies minimum requirements for braced wall panels along interior or exterior braced wall lines.

b. See Section 2308.6.3 for full description of bracing methods.

c. For Method GB, gypsum wallboard applied to framing supports that are spaced at 16 inches on center.

d. The required lengths shall be doubled for gypsum board applied to only one face of a braced wall panel.

e. Percentage shown represents the minimum amount of bracing required along the building length (or wall length if the structure has an irregular shape).

f. DWB, SFB, PBS, and HPS wall braces are not permitted in Seismic Design Catergories D or E.

g. Minimum length of panel bracing of one face of the wall for WSP sheathing shall be at least 4'-0" long or both faces of the wall for GB or PCP sheathing shall be at least 8'-0" long; h/w ratio shall not exceed 2:1. Wall framing to which sheathing used for bracing is applied shall be nominal 2 inch wide factual 1 1/2 inch (38 mm) or larger members and spaced a maximum of 16 inches on center. Braced wall panel construction types shall not be mixed within a braced wall line.

h. WSP sheathing shall be a minimum of 15/32" thick nailed with 8d common placed 3/8 inches from panel edges and spaced not more than 6 inches on center and 12 inches on center along intermediate framing members.

SECTION 52. Section 2308.6.5.1 is hereby amended to read as follows:

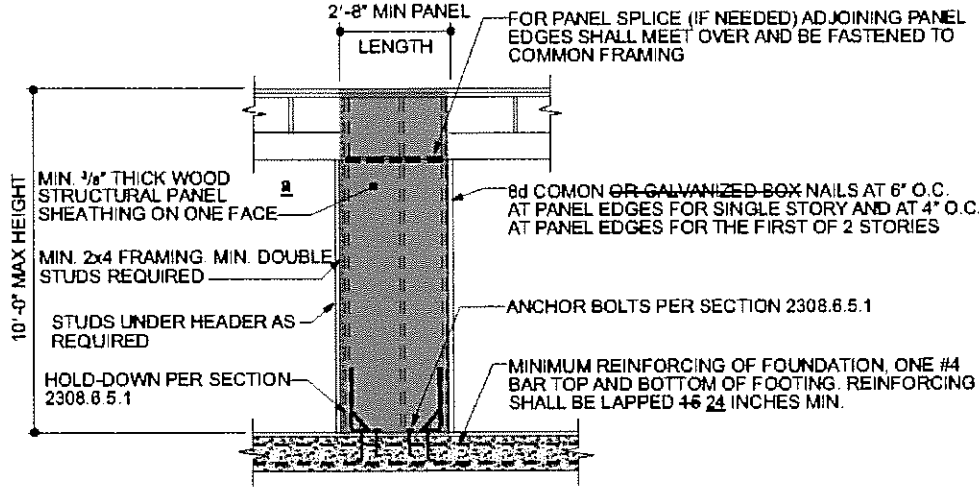
2308.6.5.1 Alternate braced wall (ABW).

An ABW shall be constructed in accordance with this section and Figure 2308.6.5.1. In one-story buildings, each panel shall have a length of not less than 2 feet 8 inches (813 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with 3/8-inch (3.2 mm) minimum-thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Table 2304.10.1 and blocked at wood structural panel edges. For structures assigned to Seismic Design Category D or E, each panel shall be sheathed on one face with 15/32-inch minimum-thickness (11.9 mm) wood structural panel sheathing nailed with 8d common nails spaced 3 inches on panel edges, 3 inches at intermediate supports. Two anchor bolts installed in accordance with Section 2308.3.1 shall be provided in each panel. Anchor bolts shall be placed at each panel outside quarter points. Each panel end stud shall have a hold-down device fastened to the foundation, capable of providing an approved uplift capacity of not less than 1,800 pounds (8006 N). The hold-down device shall be installed in accordance with the manufacturer's recommendations. The ABW shall be supported directly on a foundation or on floor framing supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12- inch (305 mm by 305 mm) continuous footing ~~or turned-down slab-edge~~ is permitted at door openings in the braced wall line.

This continuous footing ~~or turned-down slab~~ edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped ~~15~~24 inches (~~381~~610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

. . .

SECTION 53. Figure 2308.6.5.1 is hereby amended to read as follows:



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. For structures assigned to Seismic Design Category D or E, sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing.

FIGURE 2308.6.5.1
ALTERNATE BRACED WALL PANEL (ABW)

SECTION 54. Section 2308.6.5.2 is hereby amended to read as follows:

2308.6.5.2 Portal frame with hold-downs (PFH).

A PFH shall be constructed in accordance with this section and Figure 2308.6.5.2. The adjacent door or window opening shall have a full-length header.

In one-story buildings, each panel shall have a length of not less than 16 inches (406 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be

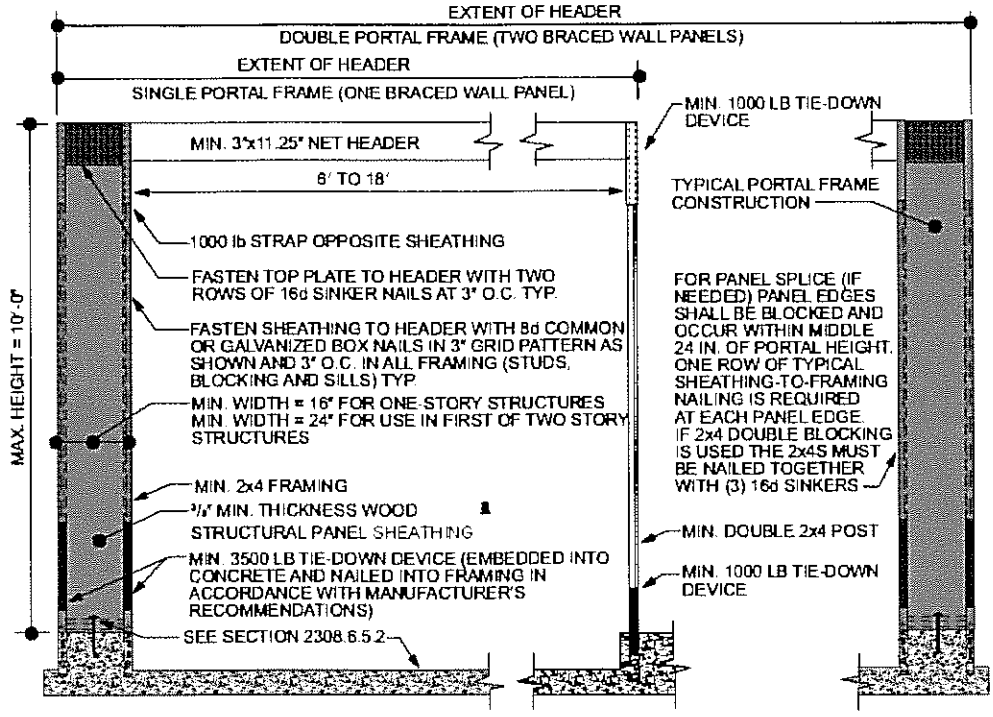
sheathed on one face with a single layer of 3/8-inch (9.5 mm) minimum-thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure 2308.6.5.2. For structures assigned to Seismic Design Category D or E, each panel shall be sheathed on one face with 15/32-inch minimum-thickness (11.9 mm) wood structural panel sheathing nailed with 8d common nails spaced 3 inches on panel edges, 3 inches at intermediate supports and in accordance with Figure 2308.6.5.2. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure 2308.6.5.2. A built-up header consisting of at least two 2-inch by 12-inch (51 mm by 305 mm) boards, fastened in accordance with Item 24 of Table 2304.10.1 shall be permitted to be used. A spacer, if used, shall be placed on the side of the built-up beam opposite the wood structural panel sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall be not less than 6 feet (1829 mm) and not more than 18 feet (5486 mm) in length. A strap with an uplift capacity of not less than 1,000 pounds (4,400 N) shall fasten the header to the inner studs opposite the sheathing. One anchor bolt not less than 5/8 inch (15.9 mm) diameter and installed in accordance with Section 2308.3.1 shall be provided in the center of each sill plate. The studs at each end of the panel shall have a hold-down device fastened to the foundation with an uplift capacity of not less than 3,500 pounds (15 570 N).

Where a panel is located on one side of the opening, the header shall extend between the inside face of the first full-length stud of the panel and the bearing studs at

the other end of the opening. A strap with an uplift capacity of not less than 1,000 pounds (4400 N) shall fasten the header to the bearing studs. The bearing studs shall also have a hold-down device fastened to the foundation with an uplift capacity of not less than 1,000 pounds (4400 N). The hold-down devices shall be an embedded strap type, installed in accordance with the manufacturer's recommendations. The PFH panels shall be supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12-inch (305 mm by 305 mm) continuous footing ~~or turned-down slab edge~~ is permitted at door openings in the braced wall line. This continuous footing ~~or turned-down slab edge~~ shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped not less than ~~15~~24 inches (~~381~~610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

. . .

SECTION 55. Figure 2308.6.5.2 is hereby amended to read as follows:



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 4.448 N.

a. For structures assigned to Seismic Design Category D or E, sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing.

FIGURE 2308.6.5.2
PORTAL FRAME WITH HOLD-DOWNS (PFH)

SECTION 56. Section 2308.6.8.1 is hereby amended to read as follows:

2308.6.8.1 Foundation requirements.

. . .

Exception: For structures with a maximum plan dimension not more than 50 feet (15240 mm), continuous foundations are required at exterior walls only for structures assigned to Seismic Design Category A, B, or C.

For structures in Seismic Design Categories D and E, exterior braced wall panels shall be in the same plane vertically with the foundation or the portion of the structure containing the offset shall be designed in accordance with accepted engineering practice and Section 2308.1.1.

~~**Exceptions:**~~

~~1. Exterior braced wall panels shall be permitted to be located not more than 4 feet (1219 mm) from the foundation below where supported by a floor constructed in accordance with all of the following:~~

~~1.1. Cantilevers or setbacks shall not exceed four times the nominal depth of the floor joists.~~

~~1.2. Floor joists shall be 2 inches by 10 inches (51 mm by 254 mm) or larger and spaced not more than 16 inches (406 mm) on center.~~

~~1.3. The ratio of the back span to the cantilever shall be not less than 2 to 1.~~

~~1.4. Floor joists at ends of braced wall panels shall be doubled.~~

~~1.5. A continuous rim joist shall be connected to the ends of cantilevered joists. The rim joist is permitted to be spliced using a metal tie not less than 0.058 inch (1.47 mm) (16 galvanized gage) and 11/2 inches (38 mm) in width fastened with six 16d common nails on each side. The metal tie shall have a yield stress not less than 33,000 psi (227 MPa).~~

~~1.6. Joists at setbacks or the end of cantilevered joists shall not carry gravity loads from more than a single story having uniform wall and roof loads nor carry the reactions from headers having a span of 8 feet (2438 mm) or more.~~

~~2. The end of a required braced wall panel shall be allowed to extend not more than 1 foot (305 mm) over an opening in the wall below. This requirement is applicable to braced wall panels offset in plane and braced wall panels offset out of~~

~~plane as permitted by Exception 1. Braced wall panels are permitted to extend over an opening not more than 8 feet (2438 mm) in width where the header is a 4-inch by 12-inch (102 mm by 305 mm) or larger member.~~

SECTION 57. Section 2308.6.9 is hereby amended to read as follows:

2308.6.9 Attachment of sheathing.

Fastening of braced wall panel sheathing shall not be less than that prescribed in Tables 2308.6.1 or 2304.10.1. Wall sheathing shall not be attached to framing members by adhesives. Staple fasteners in Table 2304.10.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E, or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the Building Official.

All braced wall panels shall extend to the roof sheathing and shall be attached to parallel roof rafters or blocking above with framing clips (18 gauge minimum) spaced at maximum 24 inches (6096 mm) on center with four 8d nails per leg (total eight 8d nails per clip). Braced wall panels shall be laterally braced at each top corner and at maximum 24 inch (6096 mm) intervals along the top plate of discontinuous vertical framing.

SECTION 58. Section 6501 is hereby amended to read as follows:

SECTION 6501 DEFINITIONS

. . .

FACE OF BUILDING. The general outer surface, not including cornices, bay windows or other ornamental trim, of any ~~main~~ exterior wall of a building.

. . .

SECTION 59. Section 6502.1 is hereby amended to read as follows:

6502.1 Scope.

This Chapter is intended to regulate the construction, erection, alteration, repair and maintenance of all signs, and their supports in the unincorporated territory of the County of Los Angeles, except ground signs extending not more than 6 feet (1829 mm) above grade. Signs required by Chapter 10, 11A or 11B are exempt from the requirements of this Chapter. Plastic signs in an open mall shall comply with Section 402.6.4 and this Chapter. Any other signs shall comply with the sign requirements in this Code and this Chapter.

SECTION 60. Section 6502.5 is hereby amended to read as follows:

6502.5 Projection and Clearance.

Signs extending beyond the exterior wall of the building shall comply with Section 705.2 and the following requirements.

Signs may project over a public street, public sidewalk or building line in accordance with Section 3202 and a distance as determined by the clearance of the bottoms thereof above the level of the sidewalk or grade immediately below, whichever is more restrictive, as follows:

Clearance less than 8 feet (2438 mm)~~, 6-inch (152 mm) projection;~~ shall be prohibited.

~~Clearance from 8 feet (2438 mm) to 10 feet (3048 mm), 1 foot (305 mm) projection;~~

~~And above~~Clearance 8 feet (2438 mm) and above, a 1 foot (305 mm) projection is permitted and~~,~~ for each additional 2-foot clearance (610 mm), an additional ~~1 foot~~1 foot (305 mm) projection is permitted;

. . .

SECTION 61. Section 6502.6 is hereby amended to read as follows:

6502.6 Materials.

Signs and their supports may be constructed of any material allowed in this Code, unless otherwise specified in this Chapter for the classification and location of sign to be erected.

Glass used in signs shall be of the size, thickness and type given in Table 65-1 of this Chapter and shall comply with the requirements of Chapter 24.

Exceptions:

~~1. Surfaces of signs not more than 55 feet (16764 mm) above grade may be of approved plastic material which has a flame-spread rating of 25 or less when tested in accordance with Standard 8-1, of the Uniform Building Code, 1997 Edition, as published by the International Conference of Building Officials, in the way intended for use.~~

~~2.~~ Notwithstanding any other provisions of this Code, plastics which burn at a rate no faster than 2.5 inches per minute (64 mm/s) when tested in accordance with ASTM D 635 shall be deemed approved plastics and ~~can~~may be used as the display

surface material and for the letters, decorations and facing on signs and outdoor display structures.

The following signs shall comply with this Chapter and as noted:

1. Warning signs regarding hazardous materials shall comply with Section 415.

2. Address identification signs shall comply with Section 501.2.

3. Fire Protection System signs shall comply with Chapter 9.

4. Light-transmitting plastic interior signs shall comply with Section 2611.

5. Public toilet facility signs shall comply with Chapter 11A or 11B.

6. Signage for elevators shall comply with Chapter 30 and Chapter 11A or 11B, when applicable.

SECTION 62. Section 6502.7 is hereby amended to read as follows:

6502.7 Prohibited Locations.

Signs and their supports shall not be erected, constructed or maintained so as to obstruct any fire escape or any window or door or opening used as part of the means of egress or as part of the accessible route, except as permitted by Chapters 10, 11A and 11B.

No sign shall project into any alley whatsoever below a height of 14 feet (4267 mm) above grade or more than 6 inches (152 mm) when over 14 feet (4267 mm).

No sign shall be erected in such a manner that any portion of its surface or supports will interfere in any way with the free use of any fire escape, exit or standpipe,

or obstruct any required ventilator, door or stairway. No sign shall obstruct the free use of any window on the same premises.

No sign shall be erected in such a manner as to interfere with, mislead or confuse traffic.

SECTION 63. Section 6504 is hereby amended to read as follows:

SECTION 6504 PROJECTING SIGNS

Projecting signs attached to a building shall be constructed of noncombustible materials, or of any material complying with Sections 705.2.1 through 705.2.3. The thickness of any such sign shall not exceed the following:

. . .

SECTION 64. Section 6506.1 is hereby amended to read as follows:

6506.1 Access.

Passages clear of all obstructions shall be left under all signs exceeding a height of 4 feet (1219 mm) above the roof thereunder or immediately adjacent thereto. There shall be one such passage or access opening for each building covered and at least every 50 feet (15 240 mm) in the length of the sign, and when such signs are at right angles to athe face of ~~the~~ building, within 20 feet (6096 mm) of parapet or exterior walls. Such passages shall not be less than 3 feet (914 mm) wide and 4 feet (1219 mm) high and shall be at the parapet or roof level.

SECTION 65. Section 6507.1 is hereby amended to read as follows:

6507.1 Marquee Signs.

Signs may be placed on, attached to or constructed on a marquee that meets the requirements for a marquee ~~as described in~~ constructed in accordance with Sections 3106 and 3202.

The marquee sign:

1. Shall not project beyond the perimeter of the marquee,
2. Shall not extend more than 6 feet above a marquee,
3. Shall not extend more than 1 foot below a marquee, and
4. Shall not have a vertical dimension greater than 8 feet.

SECTION 66. Section 6507.2 is hereby amended to read as follows:

6507.2 Cloth and banner signs.

Cloth and banner signs placed on buildings shall be ~~strongly~~ constructed and securely attached flat against the building. They shall be removed as soon as torn or damaged.

SECTION 67. Section 6601.1 is hereby amended to read as follows:

6601.1 Structures regulated.

The provisions of this Chapter are intended to regulate structures not otherwise regulated by this or other Codes, which affect or may affect ~~the physical~~public safety ~~of human beings~~, and shall include the installation, maintenance and operations of public assembly tents, amusement devices, towers, membrane or temporary structures not regulated by Chapter 31, and other structures.

. . .

SECTION 68. Section 6601.3 is hereby amended to read as follows:

6601.3 Construction requirements.

Amusement devices, and all other structures, equipment or devices regulated by this eChapter, whether specifically mentioned or not, shall be made structurally safe, with due allowance for impact, wear and injury during use.

. . .

SECTION 69. Section 6602.1 is hereby amended to read as follows:

6602.1 General.

Amusement devices or structures shall be regulated by this Section. Amusement devices or structures located within special amusement buildings must also comply with the requirements of Sections 411 and 903.2.11.6.

SECTION 70 Section 6604 is hereby amended to read as follows:

SECTION 6604 REBOUND TUMBLING CENTER

6604.1 General.

Rebound tumbling center, as used in this Chapter, is a place where rebound tumbling equipment is provided and maintained for public use and shall comply with Sections 6604.1 through 6604.6.

SECTION 71 Section 6605 is hereby amended to read as follows:

~~**SECTION 6605 LAYOUT OF REBOUNDING TUMBLING EQUIPMENT**~~

6604.2 Layout of Rebounding Tumbling Equipment.

. . .

SECTION 72 Section 6606 is hereby amended to read as follows:

~~SECTION 6606 CONSTRUCTION OF PITS~~

6604.3 Construction of Pits.

. . .

SECTION 73 Section 6607 is hereby amended to read as follows:

~~SECTION 6607 CONSTRUCTION OF EQUIPMENT~~

6604.4 Construction of Equipment.

. . .

SECTION 74 Section 6608 is hereby amended to read as follows:

~~SECTION 6608 USE OF PADDING~~

6604.5 Use of Padding.

. . .

SECTION 75 Section 6609 is hereby amended to read as follows:

~~SECTION 6609 FENCING~~

6604.6 Fencing.

. . .

SECTION 76 Section 6610 is hereby amended to read as follows:

~~SECTION 6610 INSPECTION~~

6604.7 Inspection.

. . .

SECTION 77 Section 6611 is hereby amended to read as follows:

SECTION ~~6611~~6605 AUTOMOBILE RACING FACILITIES

~~6611~~6605.1 Scope.

Every person or corporation owning or operating oval and other closed track automobile racing facilities shall erect and maintain protective fencing between grandstands or bleacher areas in accordance with ~~Subs~~Section 661105.2. This Section shall not apply where racing is limited to quarter midget cars, go-carts and similar smaller vehicles.

~~6611~~6605.2 Protective Fencing.

The location and construction of fencing shall comply with the following~~:~~:

~~6611~~6605.2.1 Location.

Fencing shall be installed between the grandstands or bleachers and the track surface in the following situations:

~~A~~1. When such surface is a curve and within 100 feet (30 480 mm) of the grandstands or bleachers.

~~B~~2. When such surface is other than a curve and is within 50 feet (15 240 mm) of the grandstands or bleachers.

~~C~~3. ~~Notwithstanding Subsections A and B~~When such surface is within 50 feet (15 240 mm) of grandstands or bleachers and such grandstands and bleachers are located within the infield or other area surrounded by the track.

~~6611~~6605.2.2 Height.

. . .

~~6611~~6605.2.3 Construction.

. . .

~~6611~~6605.3 **Curves.**

. . .

SECTION 78 Section 6703 is hereby amended to read as follows:

SECTION 6703 LIMITATIONS

No provisions of this Chapter shall require or be construed to require devices on exit doors or on sleeping room emergency exits contrary to the requirements specified in Section ~~1029~~1030.

SECTION 79 Section 6709.2 is amended to read as follows:

. . .

Exceptions:

. . .

4. In residential occupancies, doors ~~not required by Section 1029 or 1008,~~ other than means of egress doors complying with Section 1010 and emergency escape and rescue doors complying with Section 1030, may be equipped with security-type hardware which requires a key to release from the interior side of the door if the sleeping rooms are protected with a fire-warning system as set forth in Sections 907.2.11 and an automatic sprinkler system as required by Section 903.2.8.

. . .

SECTION 80 Section 6710 is amended to read as follows:

SECTION 6710 DOORS: SLIDING GLASS DOORS

. . .

Locking devices installed on sliding glass doors ~~providing the exit required by Section 1003 or providing for the emergency escape or rescue required by Section 1029~~complying with Sections 1010 and 1030 shall be releasable from the inside without the use of a key, tool, or excessive force.

SECTION 81. Section 6715.1 is hereby amended to read as follows:

6715.1 Emergency egress windows.

Locking devices installed on windows providing the emergency egress required by Section ~~10291~~1030 shall be releasable from the inside without use of a key, tool, or excessive force.

SECTION 82. Section 6802 is hereby amended to read as follows:

. . .

KILOWATT THERMAL. Unit of measurement ~~to approximate~~of the amount of energy produced by a solar thermal collector. Each square meter of collector space equals 0.7 kilowatts thermal. This factor shall be used uniformly for unglazed collectors, flat plate collectors, and evacuated tubular collectors.

. . .

SECTION 83. Section 6804 is hereby amended to read as follows:

SECTION 6804 PERMITS

Upon approval of a permit application by the Building Official, a building, electrical or plumbing permit, as applicable, will be issued for the work described in the application. A combined solar energy permit may be issued for photovoltaic systems.

installation, which will include all building and electrical work. The combined solar energy permit is subject to the requirements of this Code and the Electrical Code.

SECTION 84. Section 6805 is hereby amended to read as follows:

SECTION 6805 FEES

Permit fees for the installation of small residential rooftop solar energy systems shall be charged according to the applicable fees prescribed in Section 107 of this Code, Section 82-8 of the Electrical Code, and Sections 103.10 and 103.11 of the Plumbing Code, as applicable. The combined solar energy permit fee for small residential rooftop photovoltaic systems shall not exceed $500 unless modified by or in accordance with Government Code section 66015 or other applicable law.

. . .

SECTION 85. Section 9403 is hereby amended to read as follows:

SECTION 9403 DEFINITIONS

For purposes of this Chapter, the applicable definitions identified in Chapter 16 of this Code and the following definitions apply:

. . .

SECTION 86. Section 9502 is hereby amended to read as follows:

SECTION 9502 SCOPE

The provisions of this Chapter shall apply to all tilt-up concrete wall buildings with flexible diaphragms constructed, under construction, or for which a building permit was issued prior to April 13, 1975~~, and which on the effective date of this ordinance have concrete tilt-up bearing walls as defined herein~~.

SECTION 87. Section 9503 is hereby amended to read as follows:

SECTION 9503 DEFINITIONS

For purposes of this Chapter, the applicable definitions contained in ~~Chapter 16 of~~ this Code and the following definitions shall apply~~.~~:

. . .

FLEXIBLE DIAPHRAGMS is defined as roofs and floors such as those sheathed with plywood, wood decking (1-by or 2-by) or metal decks without concrete topping slabs.

. . .

SECTION 88 Section 9505 is hereby amended to read as follows:

SECTION 9505 GENERAL REQUIREMENTS

9505.1 General.

The owner of each building within the scope of this Chapter shall, upon service of an Earthquake Hazard Reduction Compliance Order, cause a structural analysis of the building to be made by a civil or structural engineer or architect licensed by the State of California to conduct structural analysis and shall submit such analysis to the Department of Public Works for review. The structural analysis shall state whether or not the building meets the requirements of this Chapter. If such a structural analysis indicates that the building does not meet the requirements of this Chapter, the owner shall either obtain a demolition permit and demolish the building or submit plans for structural alterations of the building so that it will comply with the provisions of this Chapter together with a structural analysis so indicating, and perform the work.

. . .

9505.2 Alteration and repairs.

Alterations and repairs required to meet the provisions of this Chapter shall comply with applicable structural requirements of this Code unless specifically modified in this Chapter.

9505.3 Requirements for plans.

The plans shall accurately reflect the results of the engineered investigation and design and shall show all pertinent dimensions and sizes for plan review and construction. The following shall be provided:

1. Floor plans and roof plans shall show existing framing construction, diaphragm construction, proposed wall anchors, cross-ties and collectors. Existing nailing, anchors, cross-ties and collectors shall also be shown on the plans if they are considered part of the lateral force-resisting systems.

2. At elevations where there are alterations or damage, details shall show roof and floor heights, dimensions of openings, locations and extent of existing alterations or damage and proposed repairs.

3. Typical wall panel details and sections with panel thickness, height, pilasters and location of anchors shall be provided.

4. Details shall include existing and new anchors and the method of developing anchor forces into the diaphragm framing, existing and/or new cross-ties, and existing and/or new or improved support of roof and floor girders at pilasters or walls.

5. The basis for design and the applicable Building Code used for the design shall be stated on the plans.

6. Plans submitted pursuant to the provisions of this Chapter shall be signed by the licensed civil or structural engineer or architect responsible for the seismic analysis of the building and shall comply with the requirements of this Code and this Section.

9505.4 Structural observation, testing, inspection.

Structural observation, in accordance with Section 1704.6, shall be required for all structures in which seismic retrofit is being performed in accordance with this Chapter. Structural observation shall include visual observation of work for conformance to the approved construction documents and confirmation of existing conditions assumed during design.

Structural testing and inspection for new construction materials shall be in accordance with this Code, except as modified by this Chapter.

SECTION 89 Section 9506 is hereby amended to read as follows:

SECTION 9506 ANALYSIS AND DESIGN

9506.1 ~~Wall Panel Anchorage~~Reinforced Concrete and Reinforced Masonry Wall Anchorage.

Concrete and masonry walls shall be anchored to all floors and roofs which provide lateral support for the wall. The anchorage shall provide a positive direct connection between the wall and floor or roof construction capable of resisting ~~a horizontal force equal to 45 percent of the tributary wall weight for essential facilities,~~

~~and 30 percent of the tributary wall weight for all other buildings, or a minimum force of 250 pounds per linear foot (3.65 kN/m) of wall, whichever is greater. The required anchorage shall be based on the tributary wall panel assuming simple supports at floors and roof~~75 percent of the horizontal forces specified in Section 1613 of this Code.

9506.2 Special Requirements for Wall ~~Anchors and Continuity Ties~~Anchorage Systems.

The steel elements of the wall anchorage systems ~~and continuity ties~~ shall be designed ~~by the allowable stress design method using a load factor of 1.7. The one-third stress increase permitted by Section 1605.3.2 shall not be permitted for materials using allowable stress design methods~~in accordance with this Code without the use of the 1.33 short duration allowable stress increase when using allowable stress design.

~~The strength design specified in Section 1909, using a load factor of 2.0 in lieu of 1.4 for earthquake loading, shall be used for design of embedments in concrete.~~

Wall anchors shall be provided to resist out-of-plane forces, independent of existing shear anchors.

Exception: Existing cast-in-place shear anchors may be used as wall anchors if the tie element can be readily attached to the anchors and if the engineer or architect can establish tension values for the existing anchors through the use of approved as-built plans or testing, and thorough analysis showing that the bolts are capable of resisting the total shear load (including dead load) while being acted upon by the maximum tension force due to earthquake. Criteria for analysis and testing shall be determined by the Building Official.

Expansion anchors are ~~not allowed without specific approval of the Building Official~~only allowed with special inspection and approved testing for seismic loading.

Attaching the edge of ~~steel decks or~~ plywood sheathing to steel ledgers does not comply with the positive anchoring requirements of ~~the Code~~this Chapter. Attaching the edge of steel decks to steel ledgers is not considered as providing the positive anchorage of this Chapter unless testing and/or analysis is performed to establish shear values for the attachment perpendicular to the edge of the deck. Where steel decking is used as a wall anchor system, the existing connections shall be subject to field verification and the new connections shall be subject to special inspection.

9506.3 Development of Anchor Loads into the Diaphragm.–

Development of anchor loads into roof and floor diaphragms shall comply with Section ~~9506.10~~1613 of this Code, using horizontal forces that are 75 percent of those used for new construction.

Exception: If continuously tied girders are present, then the maximum allowable spacing between the continuity ties is ~~36 feet (10 973 mm)~~the greater of the girder spacing or 24 feet (7314 mm). Added chords of diaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous cross-ties. The maximum shear used to determine the depth of the subdiaphragm shall not exceed 75 percent of the maximum diaphragm shear.

In wood diaphragms, anchorage shall not be accomplished by use of toenails or nails subject to withdrawal.~~, nor shall w~~Wood ledgers, top plates or framing shall not be

used in cross-grain bending or cross-grain tension. The continuous ties required by Section ~~9506.101~~1613 of this Code shall be in addition to the diaphragm sheathing.

Lengths of development of anchor loads in wood diaphragms shall be based on existing field nailing of the sheathing unless existing edge nailing is positively identified on the original construction plans or at the site.

~~At re-entrant corners, continuity collectors may be required for existing return walls not designed as shear walls, to develop into the diaphragm a force equal to the lesser of the rocking or shear capacity of the return wall, or the tributary shear, but not exceeding the capacity of the diaphragm. Shear anchors for the return wall shall be commensurate with the collector force. If a truss or beam other than rafters or purlins is supported by the return wall or by a column integral with the return wall, then an independent secondary column is required to support the roof or floor members.~~

~~Seismic design of return walls and fins/canopies at entrances shall ensure deflection compatibility with the diaphragm by either seismically isolating the element or attaching the element and integrating its load into the diaphragm.~~

9506.4 Anchorage at Pilasters.

Anchorage of pilasters shall be designed for the tributary wall anchoring load per Section 9506.1 of this Code, considering the wall as a two-way slab. The edges of the two-way slab shall be considered fixed when there is continuity at pilasters and shall be considered pinned at roof and floor. The pilasters or the walls immediately adjacent to the pilasters shall be anchored directly to the roof framing such that the existing vertical

anchor bolts at the top of the pilasters are by-passed without ~~causing~~permitting tension or shear failure at the top of the pilasters.

Exception: If existing vertical anchor bolts at the top of the pilasters are used for the anchorage, then additional exterior confinement shall be provided as required to resist the total anchorage force.

The minimum anchorage force at a floor or roof between the pilasters shall be that specified in Section 9506.1 of this Code.

~~**9506.5 Evaluation of Existing Structural Conditions.**~~

~~If the structural analysis submitted pursuant to Section 9505 indicates that the building does not meet the requirements of this Chapter, then the engineer or architect shall include in said analysis a report of any observed structural conditions, including, but not limited to, cracks, structural damage or alterations, that may have a substantial effect on the seismic integrity of the building and shall include provisions for the repair of these conditions in the plans submitted to the department for review and approval.~~

~~**9506.6 Miscellaneous.**~~

~~Existing mezzanines relying on the tilt-up walls for vertical and/or lateral support shall be anchored to the walls for the tributary mezzanine load. Walls depending on the mezzanine for lateral support shall be anchored per Sections 9506.1, 9506.2 and 9506.3.~~

~~**Exception:** Existing mezzanines that have independent lateral and vertical support need not be anchored to the walls.~~

~~Existing interior masonry or concrete walls, not designed as shear walls, which extend to the floor above or to the roof diaphragm shall also be anchored for out-of-plane forces per Sections 9506.1, 9506.2 and 9506.3 of this Code. In the in-plane direction, the walls shall be isolated or developed into the diaphragm to resist a lateral force equal to the lesser of the rocking or shear capacity of the wall, or the tributary shear, but in no event to exceed the diaphragm capacity.~~

~~9506.7 Symmetry.~~

~~Symmetry of anchorage systems is required. Non-symmetrical anchorage systems may be allowed when it can be shown that all components of forces are positively resisted as determined by calculations or tests.~~

~~9506.8 Minimum Roof Member Size.~~

~~Wood members used to develop anchorage forces to the diaphragm shall not be less than 3-inch (76mm) nominal thickness when damaged members are replaced. All such members must be checked for earthquake loads as part of the wall anchorage system in addition to dead and live loads. For existing buildings, the member check shall be without the one-third stress increase per Section 1605.3.2.~~

~~9506.9 Combination of Anchor Types.~~

~~The maximum allowable combined load resisted by a combination of different types of anchors that exhibit different behavior or stiffness is not the sum of the allowable load for each anchor. The combined capacity of the new and existing connectors shall be taken as the allowable load of the stiffest anchor.~~

~~**Exception:** Existing anchors may be combined with new anchors for retrofit projects where existing anchors are undamaged and will resist loads equally with a new anchor of identical manufacture, type and installation. The combined allowable load shall be twice the allowable load of a single anchor.~~

~~**9506.10 Diaphragms.**~~

~~Diaphragms supporting concrete walls shall have continuous ties or struts between diaphragm chords to distribute the anchorage forces specified in Section 12.11 of ASCE 7-10. The spacing of continuous ties shall not exceed 25 feet (7620 mm). Added chords of subdiaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous crossties. The maximum diaphragm shear used to determine the depth of the subdiaphragms shall not exceed 300 pounds per foot (4.38 kN/m). The maximum length-to-width ratio of the wood structural subdiaphragm shall be 2 ½:1.~~

9506.5 Symmetry.

Symmetry of wall anchorage and continuity connectors about the minor axis of the framing member is required.

Exception: Eccentricity may be allowed when it can be shown that all components of forces are positively resisted. The resistance must be supported by calculations or tests.

9506.6 Combination of Anchor Types.

New anchors used in combination on a single framing member shall be of compatible behavior and stiffness.

9506.7 Anchorage at Interior Walls.

Existing interior reinforced concrete or reinforced masonry walls that extend to the floor above or to the roof diaphragm shall be anchored for out-of-plane forces per Sections 9506.1 and 9506.3. Walls extending through the roof diaphragm shall be anchored for out-of-plane forces on both sides, and continuity ties shall be spliced across or continuous through the interior wall to provide diaphragm continuity.

9506.8 Collectors.

If collectors are not present at reentrant corners or interior shear walls, they shall be provided. Existing or new collectors shall be designed for the capacity required to develop into the diaphragm a force equal to the lesser of the rocking or shear capacity of the reentrant wall or the tributary shear based on 75 percent of the horizontal forces specified in Chapter 16 of this Code. The capacity of the collector need not exceed the capacity of the diaphragm to deliver loads to the collector. A connection shall be provided from the collector to the reentrant wall to transfer the full collector force (load). If a truss or beam other than a rafter or purlin is supported by the reentrant wall or by a column integral with the reentrant wall, then an independent secondary column is required to support the roof or floor members whenever rocking or shear capacity of the reentrant wall is less than the tributary shear.

9506.9 Mezzanines.

Existing mezzanines relying on reinforced concrete or reinforced masonry walls for vertical and/or lateral support shall be anchored to the walls for the tributary

mezzanine load. Walls depending on the mezzanine for lateral support shall be anchored per Sections 9506.1, 9506.2 and 9506.3.

Exception: Existing mezzanines that have independent lateral and vertical support need not be anchored to the walls.

SECTION 90. Section 9507 is hereby amended to read as follows:

SECTION 9507 MATERIALS OF CONSTRUCTION

All materials permitted by this Code, including their appropriate strength or allowable stresses, may be ~~utilized~~used to meet the requirements of this Chapter.

SECTION 91. Section 9508 is hereby deleted in its entirety.

~~**SECTION 9508 PLANS**~~

~~**9508.1 General.**~~

~~Plans submitted pursuant to the provisions of this Chapter shall be signed by the licensed civil or structural engineer or architect responsible for the seismic analysis of the building and shall comply with the requirements of this Code and this Section.~~

~~**9508.2 Plans and Specifications.**~~

~~Plans, engineering calculations, diagrams and other data shall be submitted in two or more sets with each application for a building permit.~~

~~**9508.3 Information on Plans and Specifications.**~~

~~Plans and specifications shall be drawn to scale upon substantial medium and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the proposed work will conform to the provisions of this Chapter and all relevant Codes, laws, ordinances, rules and regulations.~~

~~**9508.4 Existing Construction.**~~

~~The following information shall be made part of the approved plans:~~

~~1. The type and dimensions of existing walls and the size and spacing of existing floor and roof members.~~

~~2. The extent and type of existing wall anchorage of floors and roof members.~~

~~3. Accurately dimensioned plans and/or elevations of existing floors and concrete walls showing dimensioned openings, piers, wall thicknesses and heights.~~

~~4. The location and extent of any structural conditions as specified in Section 9506.5.~~

SECTION 92. Section 9603 is hereby amended to read as follows:

SECTION 9603 DEFINITIONS

For purposes of this Chapter, the applicable definitions contained in this Code, Appendix Chapter A1 of ~~Part 10, Title 24 of the California Code of Regulations~~the Existing Building Code, and the following definitions shall apply:

. . .

SECTION 93. Section 9605.1 is hereby amended to read as follows:

9605.1 Time limitations

The owner of each building within the scope of this Chapter shall, upon service of an order and within the time limits set forth in this Chapter, cause a structural analysis to be made of the building by a licensed civil or structural engineer or architect. If the building does not comply with standards specified in this Chapter and Appendix

Chapter A1 of ~~Part 10, Title 24 of the California Code of Regulations~~the Existing Building Code, then the owner shall cause the building to be structurally altered to conform to such standards or shall cause the building to be demolished.

. . .

3. Within 120 days after service of the order, plans for the installation of wall anchors in accordance with the requirements specified in Appendix Chapter A1 of ~~Part 10, Title 24 of the California Code of Regulations~~the Existing Building Code; or

. . .

SECTION 94. Section 9608 is hereby amended to read as follows:

SECTION 9608 INFORMATION REQUIRED ON PLANS

9608.1 General.

In addition to the seismic analysis required elsewhere in this Chapter, the licensed engineer or architect responsible for the seismic analysis of the building shall determine and record the information required by this Section and shall provide a complete set of plans, which show in detail compliance with all the requirements of this Chapter and Appendix Chapter A1 of ~~Part 10, Title 24 of the California Code of Regulations~~the Existing Building Code.

. . .

9608.2.1 Anchorage at Roof and Floor Levels.

All unreinforced masonry walls shall be anchored at the roof and all floor levels as specified in Appendix Chapter A1 of ~~Part 10, Title 24 of the California Code of Regulations~~the Existing Building Code, or by an approved equivalent method.

. . .

9608.3 Existing Construction.

. . .

3. The extent and type of parapet corrections which were performed in accordance with ~~Chapter 34 of this Code~~Section 302.6 of the Existing Building Code.

. . .

SECTION 95. Section 9609 is hereby amended to read as follows:

SECTION 9609 INTERPRETATION OF THIS CHAPTER

Removal and replacement of unreinforced masonry interior or exterior walls with materials and construction conforming to the requirements of this Code for new buildings constitutes compliance with this Chapter. Upon completion of such work, the remainder of the structure is, therefore, subject to the provisions of ~~Chapter 34, "Existing Structures."~~the Existing Building Code. Nothing in this Section shall be construed to mean that a building within the scope of this Chapter is not subject to Section 102, "Unsafe Buildings," or to Chapter 99 ~~of this Code~~.

. . .

SECTION 96. Section 9811 is hereby amended to read as follows:

SECTION 9811 COUNTY DEPARTMENTS

9811.1 Internal s~~S~~ervices d~~D~~epartment.

. . .

9811.2 Road m~~M~~aintenance d~~D~~ivision.

SECTION 97. Section 9814 is hereby amended to read as follows:

SECTION 9814 EMERGENCY PROCEDURES

. . .

The provisions of this Chapter providing for hearings shall apply to any person having any right, title, or interest in any building secured pursuant to this Section. Such person may request a hearing as to the necessity and reasonable cost of the work performed pursuant to Section 9814 within 10 days after the building, structure or Special Hazard is secured, removed, closed, covered, fenced, backfilled, or provided with some equivalent protection or within 10 days after ~~receiving notice~~being notified of such work by the Building Official.

SECTION 98. Section 9901 is hereby amended to read as follows:

SECTION 9901 SCOPE

9901.1 General.

The provisions of this Chapter shall apply to all substandard buildings, substandard structures and substandard property, as defined in this Chapter, which create a public nuisance.

9901.2 Existing Buildings.

Occupancies in existing buildings may be continued, except in such structures as are found to be unsafe as defined in Section 102 and ordered vacated ~~in accordance with this Code~~ and found to be substandard as defined in this Chapter.

SECTION 99. Section 9902 is hereby amended to read as follows:

. . .

SECTION 9902 DEFINITIONS

9902.1 ABATEMENT is the lessening, remediation, removal, or termination of substandard buildings, substandard structures and substandard property which create a public nuisance.

~~**9902.1**~~**9902.2 BOARD** is the Building Rehabilitation Appeals Board as set forth in Section 9906.

~~**9902.2 BUILDING** is any structure.~~

. . .

~~**9902.5 VEHICLE—DEFINED.**~~

~~As used in this Chapter, "vehicle" means a device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved by human power or used exclusively upon stationary rails or tracks.~~

~~**9902.6 PUBLIC NUISANCE.**~~

~~A public nuisance is one which affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.~~

9902.5 PUBLIC NUISANCE.

A public nuisance is one which affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

9902.6 VEHICLE—DEFINED.

As used in this Chapter, "vehicle" means a device by which any person or

property may be propelled, moved, or drawn upon a highway, excepting a device moved by human power or used exclusively upon stationary rails or tracks.

SECTION 100. Section 9904 is hereby amended to read as follows:

SECTION 9904 SUBSTANDARD CONDITIONS

. . .

~~**9904.10 Inadequate Exits.**~~

~~All buildings or portions thereof not provided with exit facilities as required by this Code except those buildings or portions thereof whose exit facilities conformed with all applicable laws at the time of their construction and provide adequate safe exits for the building occupants.~~

~~**9904.11 Fire Hazard.**~~

~~Any building or portion thereof, device, apparatus, equipment, combustible waste or vegetation which is in such a condition as to cause a fire or explosion or provide a ready fuel to augment the spread and intensity of fire or explosion arising from any cause.~~

~~**9904.12 Inadequate Fire Protection or Firefighting Equipment.**~~

~~All buildings or portions thereof which are not provided with the fire-resistive construction or fire-extinguishing system or equipment required by this Code, except those buildings or portions thereof which conform with all applicable laws at the time of their construction and whose fire-resistive integrity and fire-extinguishing systems and equipment provide adequate firesafety.~~

~~**9904.13 Improper Occupancy.**~~

~~All buildings or portions thereof occupied or used for any purpose for which they were not designed or intended to be used.~~

~~9904.14~~9904.10 Abandoned Buildings.

. . .

9904.11 Unpainted Buildings.

All buildings or portions thereof where the lack of paint is causing dry rot, warping and termite infestation.

9904.12 Broken Windows and Doors.

All buildings or portions thereof where broken windows or doors constitute hazardous conditions inviting trespassers and malicious mischief.

SECTION 101. Section 9905 is hereby amended to read as follows:

SECTION 9905 SUBSTANDARD PROPERTY

Any one or more of the following conditions shall constitute substandard property.

9905.1 ~~Substandard buildings~~Reserved.

9905.2 ~~Unpainted buildings causing dry rot, warping and termite infestations~~Reserved.

9905.3 ~~Broken windows constituting hazardous conditions and inviting trespassers and malicious mischief~~Reserved.

. . .

SECTION 102. Section 9906 is hereby amended to read as follows:

SECTION 9906 BUILDING REHABILITATION APPEALS BOARD

~~In order to hear appeals provided for in Chapter 98 and in this Chapter, there shall be and is hereby created a Building Rehabilitation Appeals Board consisting of five members who are qualified to pass on matters pertaining to substandard buildings and property. The members of the Board shall be appointed by and hold office at the pleasure of the Board of Supervisors and may recommend such new legislation as deemed necessary. The Board shall adopt reasonable rules and regulations for conducting its investigations. The Building Official shall be an ex officio nonvoting member and act as secretary. The Building Official shall keep a record of all proceedings and notify all parties concerned of the findings and decisions of the Board.~~ There shall be a Building Rehabilitation Appeals Board as established in Section 105.3.

SECTION 103. Section 9907 is hereby amended to read as follows:

SECTION 9907 ~~ALTERNATES~~RESERVED

~~Every member of the Building Board of Appeals (created by Section 105) is an ex officio alternate member of the Building Rehabilitation Appeals Board and may serve in the place and stead of any regular member of the Building Rehabilitation Appeals Board who is absent from any meeting and, at such meeting, shall be deemed to be a regular member of the Building Rehabilitation Appeals Board.~~

SECTION 104. Section J101 is hereby amended to read as follows:

J101 GENERAL

J101.1 Scope.

The provisions of this ~~chapter~~Appendix apply to grading, excavation, and

earthwork construction, including fills and embankments and the control of runoff from graded sites, including erosion sediments and construction-related pollutants. ~~Where conflicts occur between the technical requirements of this chapter and the geotechnical report, the geotechnical report shall govern~~. The purpose of this Appendix is to safeguard life, limb, property, and the public welfare by regulating grading on property subject to this Code.

J101.2 Flood hazard areas.

Unless the applicant has submitted ~~an engineering analysis~~a hydrology and hydraulic analysis, prepared in accordance with standard engineering practice by a ~~registered design professional~~California licensed civil engineer, that demonstrates the proposed work will not result in any increase in the level of the base flood, grading, excavation and earthwork construction, including fills and embankments, shall not be permitted in floodways designated in Chapter 11.60 of Title 11 – Health and Safety – of the Los Angeles County Code or in floodways that are in flood hazard areas established in Section 1612.3 or in flood hazard areas where design flood elevations are specified but floodways have not been designated.

J101.3 General hazards.

Whenever the Building Official determines that any existing excavation, embankment, or fill on property subject to this Code has become a hazard to life and limb, or endangers property, or adversely affects the safety, use, or stability of a public way or drainage channel, the Building Official may give written notice thereof to the owner of the property upon which the excavation, embankment, or fill is located, or

other person or agent in control of said property. Upon receipt of said notice, the owner or other person or agent in control of the property shall repair or eliminate such excavation, embankment, or fill so as to eliminate the hazard, in conformance with the requirements of this Code, within the period specified in said notice.

J101.4 Safety precautions.

If at any stage of the work the Building Official determines by inspection that further grading as authorized is likely to endanger any public or private property or result in the deposition of debris on any public way or interfere with any existing drainage course, the Building Official may order the work stopped by notice in writing served on any persons engaged in doing or causing such work to be done, and any such person shall immediately stop such work. The Building Official may authorize the work to proceed if the Building Official finds adequate safety precautions can be taken or corrective measures incorporated in the work to avoid likelihood of such danger, deposition, or interference.

If the grading work as done has created or resulted in a hazardous condition, the Building Official shall give written notice requiring correction thereof as specified in Section J101 of this Code.

J101.5 Protection of utilities.

Both the permittee and the owner of the property on which the grading is performed shall be responsible for the prevention of damage to any public and/or private utilities or services.

J101.6 Protection of adjacent property.

Both the permittee and owner of the property on which the grading is performed shall be responsible for the prevention of damage to adjacent property. No person shall excavate on land sufficiently close to the property line to endanger any adjoining public street, sidewalk, alley, or other public or private property without taking adequate measures to support and protect such property from settling, cracking, or other damage that might result from the proposed work. Any person performing any grading that involves imported or exported materials shall take special precautions, as approved by the Building Official, to prevent such materials from being deposited on adjacent properties, any public way, and/or any drainage course.

J101.7 Storm water control measures.

Both the permittee and the owner of the property on which the grading is performed shall put into effect and maintain all precautionary measures necessary to protect adjacent water courses and public or private property from damage by erosion, flooding, and deposition of mud, debris, and construction-related pollutants originating from the site during grading and related construction activities.

J101.8 Maintenance of protective devices and rodent control.

All drainage structures and other protective devices and all burrowing rodent control measures, as shown on the grading plans approved by the Building Official, shall be maintained in a good condition and, when necessary, promptly repaired by the permittee or the owner of the property on which grading has been performed or by any other person or agent in control of such property.

J101.9 Correlation with other sections.

The provisions of this Appendix are independent of the provisions of Chapter 99 of this Code relating to building and property rehabilitation. This Section may be applied even though the same facts have been used to determine that there is substandard property subject to the provisions of Chapter 99.

J101.10 Conditions of approval.

In granting any permit under this Code, the Building Official may include such conditions as may be reasonably necessary to prevent creation of a nuisance or hazard to public or private property. Such conditions may include, but shall not be limited to:

1. Improvement of any existing grading to comply with the standards of this Code.

2. Requirements for fencing of excavations or fills which would otherwise be hazardous.

3. Requirements for temporary excavations and shoring to be shown on plans.

SECTION 105. Section J102.1 is hereby amended to read as follows:

J102.1 Definitions.

~~The following words and terms shall, for the purposes of this appendix, have the meanings shown herein. Refer to Chapter 2 of the *California Building Code* for general definitions.~~For the purposes of this Appendix, the terms, phrases, and words listed in this Section and their derivatives shall have the indicated meanings.

APPROVAL. When the proposed work or completed work conforms to this Appendix, as determined by and to the satisfaction of the Building Official.

AS-BUILT. See Section J105.12.

BEDROCK. The relatively solid, undisturbed rock in place either at the ground surface or beneath superficial deposits of alluvium, colluvium and/or soil.

BENCH. A relatively level step excavated into earth material on which fill is to be placed.

BEST MANAGEMENT PRACTICE (BMP). Practices, prohibitions of practices, or other activities to reduce or eliminate the discharge of pollutants to surface waters. BMPs include structural and nonstructural controls, management practices, operation and maintenance procedures, and system, design, and engineering methods that are required to be employed in order to comply with the requirements of the National Pollution Discharge Elimination System (NPDES) permit issued to the County of Los Angeles (see Section 106.4.3 and Title 31 – Green Building Standards Code – of the Los Angeles County Code).

BORROW. Earth material acquired from an off-site location for use in grading on a site.

CIVIL ENGINEER. A professional engineer licensed in the State of California to practice in the field of civil works.

CIVIL ENGINEERING. The application of the knowledge of the forces of nature, principles of mechanics, and the properties of materials to the evaluation, design, and construction of civil works.

COMPACTION. The densification of a fill by mechanical means.

CUT. See "Excavation."

DESILTING BASINS. Physical structures, constructed for the removal of sediments from surface water runoff.

DESIGN ENGINEER. The Civil Engineer responsible for the preparation of the grading plans for the site grading work.

DOWN DRAIN. A device for collecting water from a swale or ditch located on or above a slope, and safely delivering it to an approved drainage facility.

EARTH MATERIAL. Any rock, natural soil, or fill or any combination thereof.

ENGINEERING GEOLOGIST. A geologist experienced and knowledgeable in engineering geology, holding a license as a geologist in the specialty of engineering geology issued by the State of California under the applicable provisions of the Geologist and Geophysicist Act of the Business and Professions Code.

ENGINEERING GEOLOGY. The application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

EROSION. The wearing away of the ground surface as a result of the movement of wind, water, or ice.

EXCAVATION. The removal of earth material by artificial means, also referred to as a cut.

FIELD ENGINEER. The Civil Engineer responsible for performing the functions as set forth in Section J105.3.

FILL. Deposition of earth materials by artificial means.

GEOTECHNICAL ENGINEER. See "Soils Engineer".

GEOTECHNICAL HAZARD. An adverse condition due to landslide, settlement, and/or slippage. These hazards include, but are not limited to, loose debris, slopewash, and mud flows from natural or graded slopes.

GRADE. The vertical location of the ground surface.

GRADE, EXISTING. The grade prior to grading.

GRADE, FINAL. See Section J105.7.

GRADE, FINISHED. The grade of the site at the conclusion of all grading efforts.

GRADE, INITIAL. See Section J105.7.

GRADE, ROUGH. See Section J105.7.

GRADING. An excavation or fill or combination thereof.

KEY. A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.

LANDSCAPE ARCHITECT. A person who holds a certificate to practice landscape architecture in the State of California under the applicable landscape architecture provisions of Division 3, Chapter 3.5 of the Business and Professions Code.

LINE. The horizontal location of the ground surface.

PERMITTEE. See Section J105.6.

PRIVATE SEWAGE DISPOSAL SYSTEM. A septic tank with effluent discharging into a subsurface disposal field, into one or more seepage pits, or into a

combination of a subsurface disposal field and a seepage pit or of such other facilities as may be permitted in accordance with the procedures and requirements set forth in Title 28 – Plumbing Code – of the Los Angeles County Code and as required by the Los Angeles County Department of Public Health.

PROJECT CONSULTANTS. The professional consultants required by this Code which may consist of the Design Engineer, Field Engineer, Soils Engineer, Engineering Geologist, and Landscape Architect as applicable to this Appendix.

PROFESSIONAL INSPECTION. The inspection required by this Code to be performed by the Project Consultants. Such inspections shall be sufficient to form an opinion relating to the conduct of the work.

QSD. Qualified SWPPP Developer as defined in the California State Construction General Permit.

QSP. Qualified SWPPP Practitioner as defined in the California State Construction General Permit.

SITE. A lot or parcel of land or contiguous combination thereof, under the same ownership, where grading is performed or permitted.

SLOPE. An inclined surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

SOIL. Naturally occurring superficial deposits overlying parent bedrock.

SOILS ENGINEER (GEOTECHNICAL ENGINEER). A licensed civil engineer experienced and knowledgeable in the practice of soils engineering.

SOILS ENGINEERING (GEOTECHNICAL ENGINEERING). The application of

the principles of soils mechanics in the investigation, evaluation, and design of civil works involving the use of earth materials and the inspection or testing of construction thereof.

STORM DRAIN SYSTEM. A conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, and man-made channels, designed or used for collecting and conveying storm water.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A site drawing with details, notes, and related documents that identify the measures proposed by the permittee to: (1) control erosion and prevent sediment and construction-related pollutants from being carried offsite by storm water, and (2) prevent non-storm-water discharges from entering the storm drain system.

SURFACE DRAINAGE. Flows over the ground surface.

SOIL TESTING AGENCY. An agency regularly engaged in the testing of soils and rock under the direction of a Civil Engineer experienced in soil testing.

TERRACE. A relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.

SECTION 106. Section J103 is hereby amended to read as follows:

SECTION J103 PERMITS REQUIRED

J103.1 Permits required.

Except as exempted in Section J103.2, no grading shall be performed without first having obtained a permit ~~therefor~~ from the ~~b~~Building ~~o~~Official. A grading permit does not include the construction of retaining walls or other structures. A separate

permit shall be obtained for each site and may cover both excavations and fills. Any engineered grading as described in Section J104.2.3 shall be performed by a contractor licensed by the State of California to perform the work described hereon. Regular Grading less than 5,000 cubic yards may require a licensed contractor if the Building Official determines that special conditions or hazards exist.

J103.2 Exemptions.

A grading permit shall not be required for the following:

1. When approved by the Building Official, ~~G~~grading in an isolated, self-contained area, provided there is no danger to the public, and that such grading will not adversely affect adjoining properties or public rights of way.

. . .

7. Exploratory excavations performed under the direction of a ~~registered design professional~~Geotechnical Engineer or Engineering Geologist. This shall not exempt grading of access roads or pads created for exploratory excavations. Exploratory excavations must not create a hazardous condition to adjacent properties or the public in accordance with Section J101.3. A restoration plan must be provided and approved by the Building Official for all grading of access roads or pads. Restoration shall be completed within 90 days after the completion of soils testing unless otherwise approved by the Building Official.

8. An excavation that does not exceed 50 cubic yards (38.3 m^3) and complies with one of the following conditions and as shown in Figure J103.2:

(a) Is less than 2 feet (0.6 m) in depth.

(b) Does not create a cut slope greater than 5 feet (1.5 m) measured vertically upward from the cut surface to the surface of the natural grade and is not steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

9. A fill not intended to support a structure that does not obstruct a drainage course and complies with one of the following conditions and as shown in Figure J103.2:

(a) Is less than 1 foot (0.3 m) in depth and is placed on natural terrain with a slope flatter than 5 units horizontal to 1 unit vertical (20 percent slope).

(b) Is less than 3 feet (0.9 m) in depth at its deepest point measured vertically upward from natural grade to the surface of the fill, does not exceed 50 cubic yards, and creates a fill slope no steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

(c) Is less than 5 feet (1.5 m) in depth at its deepest point measured vertically upward from natural grade to the surface of the fill, does not exceed 20 cubic yards, and creates a fill slope no steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

Exemption from the permit requirements of this aAppendix shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this eCode or any other laws or ordinances of this jurisdiction.

J103.3 Unpermitted grading.

A person shall not own, use, occupy, or maintain any site containing unpermitted

grading. For the purposes of this Code, unpermitted grading shall be defined as either of the following:

(1) Grading that was performed, at any point in time, without the required permit(s) having first been obtained from the Building Official, pursuant to Section J103.1; or

(2) Grading for which a permit was obtained pursuant to this Section, but which was not completed, pursuant to Section J105, prior to the expiration of the permit, pursuant to Section 106.5.4.

J103.4 Availability of permit at site.

No person shall perform any grading that requires a permit under this Appendix unless a copy of the grading permit and approved grading plans are in the possession of a responsible person and available at the site for the Building Official's reference.

J103.5 Grading fees.

Fees shall be assessed in accordance with the provisions of this Section. The amount of the fees shall be as specified in Section 107.

1. Plan Review Fees. When a plan or other data are required to be submitted, a plan review fee shall be paid at the time of submitting plans and specifications for review. Separate plan review fees shall apply to retaining walls or major drainage structures as required elsewhere in this Code. For excavation and fill on the same site, the fee shall be based on the volume of excavation or fill, whichever is greater.

2. Permit Fees. A fee for each grading permit shall be paid to the Building Official at the time of issuance of the permit. Separate permits and fees shall apply to retaining walls or major drainage structures as required elsewhere in this Code.

3. Site Inspection Fee. When the Building Official finds that a visual inspection of the site is necessary to establish drainage requirements for the protection of property, existing buildings, or the proposed construction, a site inspection shall be made during plan check of grading plans. A fee for such inspection shall be paid to the Building Official at the time of submitting plans and specifications for review.

J103.6 Compliance with zoning code.

The Building Official may refuse to issue a grading permit for work on a site if either the proposed grading or the proposed land use for the site shown on the grading plan application does not comply with the provisions of Title 22 – Planning and Zoning – of the Los Angeles County Code.

J103.7 Grading security.

J103.7.1 Scope and purpose.

The Building Official may require a permittee or the owner(s) of the property on which the grading is proposed to occur to provide security, as a condition of the issuance of a grading permit for any grading involving more than 1,000 cubic yards (764.6 m^3). Where unusual conditions or special hazards exist, the Building Official may require security for grading involving less than 1,000 cubic yards (764.6 m^3). The purpose of the security shall be to guarantee the permittee's obligation to mitigate any hazardous conditions, including flood and geotechnical hazards, that may be created if

the grading is not completed in accordance with the approved plans and specifications, and to complete any work that the Building Official determines is necessary to bring the property into compliance with this Appendix.

Security required by this Section may include incidental off-site grading on property contiguous with the site to be developed, provided written consent of the owner of such contiguous property is filed with the Building Official.

The Building Official may waive the requirements for security for the following:

1. Grading being done by or for a governmental agency.

2. Grading necessary to remove a geotechnical hazard, where such work is covered by an agreement and security posted pursuant to the provisions of Title 21 – Subdivisions – of the Los Angeles County Code.

3. Grading on a site, not exceeding a slope of three horizontal to one vertical, provided such grading as determined by the Building Official will not affect drainage from or to adjacent properties.

4. Filling of holes or depressions, provided such grading will not affect the drainage from or to adjacent properties.

J103.7.2 Form of security.

The security referred to in Section J103.7.1 shall be in one of the following forms:

1. A bond furnished by a corporate surety authorized to do business in this state.

2. Cash.

3. Savings and loan certificates or shares deposited and assigned to the County as provided in Chapter 4.36 of Title 4 – Revenue and Finance – of the Los Angeles County Code.

4. An instrument of credit from a financial institution subject to regulation by the state or federal government and pledging that funds in the amount required by the Building Official are on deposit and guaranteed for payment, or a letter of credit issued by such a financial institution.

J103.7.3 Amount of security.

The amount of security shall be based on the number of cubic yards of material in either excavation or fill, whichever is greater, and the cost of all drainage or other protective devices or work necessary to eliminate potential flooding and geotechnical hazards. That portion of the security valuation based on the volume of material in either excavation or fill shall be computed as follows:

100,000 cubic yards or less - 50 percent of the estimated cost of grading work.

Over 100,000 cubic yards - 50 percent of the cost of the first 100,000 cubic yards plus 25 percent of the estimated cost of that portion in excess of 100,000 cubic yards.

When the rough grading has been completed in conformance with the requirements of this Code, the Building Official may, at his or her discretion, consent to a proportionate reduction of the security to an amount estimated to be adequate to ensure completion of the grading work, site development or planting remaining to be performed. The costs referred to in this Section shall be as estimated by the Building Official.

J103.7.4 Conditions.

All security shall include the conditions that the principal shall:

1. Comply with all of the provisions of this Code, applicable laws, and ordinances;

2. Comply with all of the terms and conditions of the grading permit; and

3. Complete all of the work authorized by the permit.

J103.7.5 Term of security.

The term of each security shall begin upon the filing with the Building Official and the security shall remain in effect until the work authorized by the grading permit is completed and approved by the Building Official.

J103.7.6 Default procedures.

In the event any grading for which a permit has been issued is not completed in accordance with the approved plans and specifications for said work or with all terms and conditions of the grading permit, the Building Official may declare that a default has occurred. The Building Official shall give notice thereof to the principal and surety or financial institution executing the security, or to the owner in the case of a cash bond or assignment.

The Building Official may thereafter determine the work that is necessary to mitigate any hazardous or unsafe conditions on the site and cause such work to be performed.

Where the security consists of a bond or instrument of credit, the surety or financial institution executing the security shall be responsible for the payment of all

costs and expenses incurred by the Building Official in causing such work to be performed, up to the full amount of the security. In the case of cash security or assignment, the Building Official may pay all costs and expenses incurred in causing such work to be performed from the funds deposited, and return any unused portion of such deposit or funds to the person making said deposit or assignment.

J103.7.7 Right of entry.

The Building Official or the authorized representative of any surety company or financial institution furnishing the security shall have access to the premises described in the permit for the purpose of inspecting the work.

In the event of default, as described in Section J103.7.6, the surety or financial institution furnishing the security or the Building Official, or any person employed or engaged on the behalf of any of these parties, shall have the right to go upon the premises to perform the mitigation work, as described in Section J103.7.6.

Neither the permittee, owner, or any other person shall interfere with or obstruct the ingress into or egress from any such premises, of any authorized representative of the surety or financial institution executing the security or the Building Official engaged to perform the mitigation work, as described in Section J103.7.6.

SECTION 107. Figure J103.2 is hereby added to read as follows:

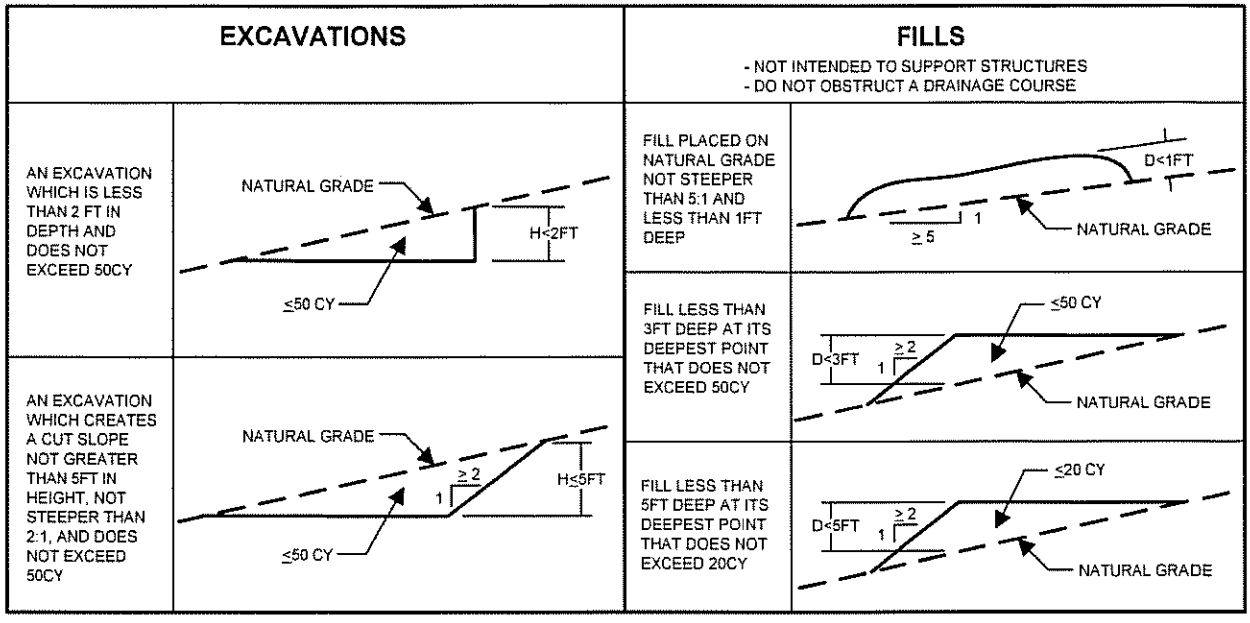


FIGURE J103.2

GRADING EXEMPTION CASES

SECTION 108. Section J104 is hereby amended to read as follows:

SECTION J104 PERMIT APPLICATION AND SUBMITTALS

J104.1 Submittal requirements.

In addition to the provisions of Section ~~105.3 and 1.8.4, as applicable~~106.4, the applicant shall state the ~~estimated quantities of excavation and fill~~following:

1. The estimated quantities of excavation, fill, borrow, removal or combination thereof.

2. The proposed land use for the site on which the grading is to be performed.

J104.2 Site plan requirements.

In addition to the provisions of Section ~~107~~106, a grading plan shall show the existing grade and finished grade in contour intervals of sufficient clarity to indicate the nature and extent of the work and show in detail that it complies with the requirements of this ~~c~~Code. The plans shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of this ~~c~~Code.

J104.2.1 Grading designation.

Grading in excess of 5,000 cubic yards (3,825 m^3) or that is proposed to support any structure shall be designated as "engineered grading." All engineered grading shall be performed in accordance with an approved grading plan and specifications prepared by a Civil Engineer, unless otherwise required by the Building Official.

Grading involving less than 5,000 cubic yards (3,825 m^3) and that will not support any structure shall be designated "regular grading" unless the permittee chooses to have the grading be designated as engineered grading, or the Building Official determines that, due to the existence of special conditions or unusual hazards, the grading should be designated as engineered grading.

J104.2.2 Regular grading requirements.

In addition to the provisions of Section 106 and Section J104.2, an application for a regular grading permit shall be accompanied by plans of sufficient clarity to indicate the nature and extent of the work. The plans shall give the location of the work, the

name of the owner, and the name of the person who prepared the plan. The plan shall include the following information:

1. General vicinity of the proposed site.

2. Limits and depths of cut and fill.

3. Location of any buildings or structures where work is to be performed, and the location of any buildings or structures within 15 feet (4.6 m) of the proposed grading.

4. Contours, flow areas, elevations, or slopes which define existing and proposed drainage patterns.

5. Storm water mitigation measures in accordance with the requirements of Section 106.4.3 of this Code. See Section J110.8 for specific requirements.

6. Location of existing and proposed utilities, drainage facilities, and recorded public and private easements and restricted use areas.

7. Location of all recorded floodways as established by Chapter 11.60 of Title 11 – Health and Safety – of the Los Angeles County Code.

8. Location of all Special Flood Hazard Areas as designated and defined in Title 44 of the Code of Federal Regulations.

J104.2.3 Engineered grading requirements.

In addition to the provisions of Section 106 and Section J104.2, an application for a permit for engineered grading shall be accompanied by plans and specifications, and supporting data consisting of a geotechnical report and engineering geology report.

Specifications shall contain information covering construction and material requirements. Plans shall be drawn to scale on paper and shall be of sufficient clarity to

indicate the nature and extent of the work proposed and shall show in detail that the proposed work will conform to the provisions of this Code and all relevant laws, ordinances, rules, and regulations. The first sheet of the plans shall depict the location of the proposed work, the name and address of the owner, and the person by whom they were prepared.

The plans shall include or be accompanied by the following information:

1. General vicinity of the proposed site.

2. Property limits and accurate contours of existing ground and details of terrain and area drainage.

3. Limiting dimensions, elevations, or finish contours to be achieved by the grading, proposed drainage channels, and related construction.

4. Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams, and other protective devices to be constructed with, or as a part of, the proposed work. A map showing the drainage area and the estimated runoff of the area served by any drains shall also be provided.

5. Location of any existing or proposed buildings or structures located on the property on which the work is to be performed and the location of any buildings or structures on adjacent properties that are within 15 feet (4.6 m) of the property or that may be affected by the proposed grading operations.

6. Recommendations in the geotechnical report and the engineering geology report shall be incorporated into the grading plans or specifications. When approved by the Building Official, specific recommendations contained in the soils engineering report

and the engineering geology report, that are applicable to grading, may be included by reference.

7. The dates of the geotechnical and engineering geology reports together with the names, addresses, and phone numbers of the firms or individuals who prepared the reports.

8. A statement of the quantities of material to be excavated and/or filled. Earthwork quantities shall include quantities for geotechnical and geological remediation. In addition, a statement of the quantities of material to be imported or exported from the site.

9. A statement of the estimated starting and completion dates for proposed work.

10. A statement signed by the owner, acknowledging that a Design Engineer, Field Engineer, Geotechnical Engineer, and Engineering Geologist, when appropriate, will be employed to perform the services required by this Code, when the Building Official requires that such professional persons be so employed. These acknowledgments shall be on a form furnished by the Building Official.

11. Storm water mitigation measures are required to be shown on the grading plan in accordance with the requirement of Section 106.4.3 of this Code. See Section J110.8 for specific requirements.

12. A drainage plan for those portions of property proposed to be utilized as a building site (building pad), including elevations of floors with respect to finish site grade and locations of proposed stoops, slabs, and fences that may affect drainage.

13. Location and type of any proposed private sewage disposal system, including the location of the expansion area.

14. Location of existing and proposed utilities, drainage facilities, and recorded public and private easements and restricted use areas.

15. Location of all recorded floodways as established by Chapter 11.60 of Title 11 – Health and Safety – of the Los Angeles County Code.

16. Location of all Special Flood Hazard Areas as designated and defined in Title 44 of the Code of Federal Regulations.

J104.3 Geotechnical and engineering geology reports.

~~A geotechnical report prepared by registered design professionals shall be provided. The report shall contain at least the following:~~

~~1. The nature and distribution of existing soils;~~

~~2. Conclusions and recommendations for grading procedures;~~

~~3. Soil design criteria for any structures or embankments required to accomplish the proposed grading; and~~

~~4. Where necessary, slope stability studies, and recommendations and conclusions regarding site geology.~~

The geotechnical report required by Section J104.2.3 shall include data regarding the nature, distribution, and strength of existing soils, conclusions, and recommendations for grading procedures and design criteria for corrective measures, including buttress fills, when necessary, and an opinion on the adequacy for the intended use of sites to be developed by the proposed grading as affected by

geotechnical factors, including the stability of slopes. All reports shall conform with the requirements of Section 111 and shall be subject to review by the Building Official. Supplemental reports and data may be required as the Building Official may deem necessary. Recommendations included in the reports and approved by the Building Official shall be incorporated in the grading plan or specifications.

The engineering geology report required by Section J104.2.3 shall include an adequate description of the geology of the site, conclusions, and recommendations regarding the effect of geologic conditions on the proposed development, and an opinion on the adequacy for the intended use of sites to be developed by the proposed grading, as affected by geologic factors. The engineering geology report shall include a geologic map and cross sections utilizing the most recent grading plan as a base. All reports shall conform with the requirements of Section 111 and shall be subject to review by the Building Official. Supplemental reports and data may be required as the Building Official may deem necessary. Recommendations included in the reports and approved by the Building Official shall be incorporated in the grading plan or specifications.

Exception: A geotechnical or engineering geology report is not required where the ~~b~~Building ~~code o~~Official determines that the nature of the work applied for is such that a report is not necessary.

J104.4 Liquefaction study.

For sites with mapped maximum considered earthquake spectral response accelerations at short periods (S_s) greater than 0.5g as determined by Section 1613, a

study of the liquefaction potential of the site shall be provided and the recommendations incorporated in the plans. A geotechnical investigation will be required when the proposed work is a "Project" as defined in California Public Resources Code section 2693, and is located in an area designated as a "Seismic Hazard Zone" as defined in Title 14 of the California Code of Regulations section 3722 and on Seismic Hazard Zone Maps issued by the State Geologist under Public Resources Code section 2696.

Exception: A liquefaction study is not required where the ~~b~~Building ~~o~~Official determines from established local data that the liquefaction potential is low.

SECTION 109. Section J105 is hereby amended to read as follows:

SECTION J105 INSPECTIONS

J105.1 General.

Grading ~~I~~inspections shall be governed by Section ~~110, Chapter 1, Division II of this code~~108 and as indicated herein. Grading operations for which a permit is required shall be subject to inspection by the Building Official. In addition, professional inspection of grading operations shall be performed by the Field Engineer, the Geotechnical Engineer, and the Engineering Geologist retained to provide such services in accordance with this Section for engineered grading and as required by the Building Official for regular grading.

J105.2 Special and supplemental inspections.

The special inspection requirements of Section 1705.6 shall apply to work performed under a grading permit where required by the ~~b~~Building ~~o~~Official. In addition

to the called inspections specified in Section J105.7, the Building Official may make such other inspections as may be deemed necessary to determine that the work is being performed in conformance with the requirements of this Code. The Building Official may require investigations and reports by an approved soil testing agency, Geotechnical Engineer and/or Engineering Geologist, and Field Engineer. Inspection reports shall be provided when requested in writing by the Building Official.

The Building Official may require continuous inspection of drainage devices by the Field Engineer in accordance with this Section when the Building Official determines that the drainage devices are necessary for the protection of the structures in accordance with Section 110.

J105.3 Field engineer.

The Field Engineer shall provide professional inspection of those parts of the grading project within such engineer's area of technical specialty, oversee and coordinate all field surveys, set grade stakes, and provide site inspections during grading operations to ensure the site is graded in accordance with the approved grading plan and the appropriate requirements of this Code. During site grading, and at the completion of both rough grading and final grading, the Field Engineer shall submit statements and reports as required by Sections J105.11 and J105.12. If revised grading plans are required during the course of the work, they shall be prepared by a Civil Engineer and approved by the Building Official.

J105.4 Geotechnical engineer.

The Geotechnical Engineer shall provide professional inspection of those parts of

the grading project within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The Geotechnical Engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this Appendix. If conditions differing from the approved geotechnical engineering and engineering geology reports are encountered during grading, the Geotechnical Engineer shall provide revised recommendations to the permittee, the Building Official and the Field Engineer.

J105.5 Engineering geologist.

The Engineering Geologist shall provide professional inspection of those parts of the grading project within such engineer's area of technical specialty, which shall include professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. If conditions differing from the approved engineering geology report are encountered, the Engineering Geologist shall provide revised recommendations to the Geotechnical Engineer.

J105.6 Permittee.

The permittee shall be responsible for ensuring that the grading is performed in accordance with the approved plans and specifications and in conformance with the provisions of this Code. The permittee shall engage project consultants, if required under the provisions of this Code, to provide professional inspections on a timely basis. The permittee shall act as a coordinator between the project consultants, the contractor,

and the Building Official. In the event of changed conditions, the permittee shall be responsible for informing the Building Official of such change and shall provide revised plans for approval.

J105.7 Required inspections.

The permittee shall call for an inspection by the Building Official at the following various stages of work and shall obtain the approval of the Building Official prior to proceeding to the next stage of work:

Pre-grade. Before any construction or grading activities occur at the site. Permittee shall schedule a pre-grade inspection with the Building Official. The permittee shall ensure that all project consultants are present at the pre-grade inspection.

Initial grade. When the site has been cleared of vegetation and unapproved fill and has been scarified, benched, or otherwise prepared for fill. No fill shall have been placed prior to this inspection.

Rough grade. When approximate final elevations have been established, drainage terraces, swales, and other drainage devices necessary for the protection of the building sites from flooding have been installed, berms have been installed at the top of the slopes, and the statements required by Section J105.12 have been received.

Final grade. When grading has been completed, all drainage devices necessary to drain the building pad have been installed, slope planting has been established, irrigation systems have been installed, and the as-built plans and required statements and reports have been submitted.

J105.8 Notification of noncompliance.

If, in the course of fulfilling their respective duties under this Appendix, the Field Engineer, the Geotechnical Engineer, or the Engineering Geologist determines that the work is not being done in conformance with this Appendix or the approved grading plans, the Field Engineer, the Geotechnical Engineer, or the Engineering Geologist shall immediately report, in writing, the discrepancies and the recommended corrective measures to the permittee and to the Building Official.

J105.9 Transfer of responsibility.

If the Field Engineer, the Geotechnical Engineer, or the Engineering Geologist of record is changed at any time after the grading plans required pursuant to Section J104.2.2 or J104.2.3 have been approved by the Building Official, the permittee shall immediately provide written notice of such change to the Building Official. The Building Official may stop the grading from commencing or continuing until the permittee has identified a replacement and the replacement has agreed in writing to assume responsibility for those parts of the grading project that are within the replacement's area of technical competence.

J105.10 Non-inspected grading.

No person shall own, use, occupy, or maintain any non-inspected grading. For the purposes of this Code, non-inspected grading shall be defined as any grading for which a grading permit was first obtained, pursuant to Section J103, above, but which has progressed beyond any point requiring inspection and approval by the Building Official without such inspection and approval having been obtained.

J105.11 Routine field inspections and reports.

Unless otherwise directed by the Building Official, the Field Engineer for all engineered grading projects shall prepare routine inspection reports and shall file these reports with the Building Official as follows:

1. Bi-weekly during all times when grading of 400 cubic yards or more per week is occurring on the site;

2. Monthly, at all other times; and

3. At any time when requested in writing by the Building Official.

Such reports shall certify to the Building Official that the Field Engineer has inspected the grading site and related activities and has found them in compliance with the approved grading plans and specifications, this Code, all grading permit conditions, and all other applicable ordinances and requirements. The reports shall conform to a standard "Report of Grading Activities" form, which shall be provided by the Building Official.

J105.12 Completion of work.

Upon completion of the rough grading work and at the final completion of the work, the following reports and drawings and supplements thereto are required for engineered grading or when professional inspection is otherwise required by the Building Official:

1. An "As-built" grading plan prepared by the Field Engineer retained to provide such services in accordance with Section J105.3 showing all plan revisions as approved by the Building Official. This shall include original ground surface elevations,

as-built ground surface elevations, lot drainage patterns, and the locations and elevations of surface drainage facilities and the outlets of subsurface drains. As-built locations, elevations, and details of subsurface drains shall be shown as reported by the Geotechnical Engineer.

The As-built grading plan shall be accompanied by a certification by the Field Engineer that to the best of his or her knowledge, the work within the Field Engineer's area of responsibility was done in accordance with the final approved grading plan.

2. A report prepared by the Geotechnical Engineer retained to provide such services in accordance with Section J105.4, including locations and elevations of field density tests, summaries of field and laboratory tests, other substantiating data, and comments on any changes made during grading and their effect on the recommendations made in the approved geotechnical engineering investigation report. The report shall include a certification by the Geotechnical Engineer that, to the best of his or her knowledge, the work within the Geotechnical Engineer's area of responsibility is in accordance with the approved geotechnical engineering report and applicable provisions of this Appendix. The report shall contain a finding regarding the safety of the completed grading and any proposed structures against hazard from landslide, settlement, or slippage.

3. A report prepared by the Engineering Geologist retained to provide such services in accordance with Section J105.5, including a final description of the geology of the site and any new information disclosed during the grading and the effect of such new information, if any, on the recommendations incorporated in the approved grading

plan. The report shall contain a certification by the Engineering Geologist that, to the best of his or her knowledge, the work within the Engineering Geologist's area of responsibility is in accordance with the approved engineering geology report and applicable provisions of this Appendix. The report shall contain a finding regarding the safety of the completed grading and any proposed structures against hazard from landslide, settlement, or slippage. The report shall contain a final as-built geologic map and cross-sections depicting all the information collected prior to and during grading.

4. The grading contractor shall certify, on a form prescribed by the Building Official, that the grading conforms to said as-built plan and the approved specifications.

5. When a landscape permit is required by Section 490.1 of the California Department of Water Resources Model Water Efficient Landscape Ordinance, the Landscape Architect shall certify on a form prescribed by the Building Official that the landscaping conforms to approved landscape plans and specifications.

J105.13 Notification of completion.

The permittee shall notify the Building Official when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage facilities and their protective devices, and all erosion-control measures have been completed in accordance with the final approved grading plan, and all required reports have been submitted and approved.

J105.14 Change of ownership.

Unless otherwise required by the Building Official, when a grading permit has

been issued on a site and the owner sells the property prior to final grading approval, the new property owner shall be required to obtain a new grading permit.

SECTION 110. Section J106.1 is hereby amended to read as follows:

J106.1 Maximum cut slope.

The slope of cut surfaces shall be no steeper than is safe for the intended use, and shall be not more than one unit vertical in two units horizontal (50-percent slope) unless the owner or the owner's authorized agent furnishes a geotechnical or an engineering geology report, or both, justifying a steeper slope. The reports must contain a statement by the Geotechnical Engineer or Engineering Geologist that the site was investigated and an opinion that a steeper slope will be stable and will not create a hazard to public or private property, in conformance with the requirements of Section 111. The Building Official may require the slope of the cut surfaces to be flatter in slope than 2 units horizontal to 1 unit vertical if the Building Official finds it necessary for the stability and safety of the slope.

Exceptions:

1. A cut surface shall be permitted to be at a slope of 1.5 units horizontal to one unit vertical (67 percent slope) provided that all of the following are met:

1.1 It is not intended to support structures or surcharges.

1.2 It is adequately protected against erosion.

1.3 It is no more than 8 feet (2438 mm) in height.

1.4 It is approved by the ~~b~~Building ~~code o~~Official.

1.5 Ground water is not encountered.

~~2. A cut surface in bedrock shall be permitted to be at a slope of one unit horizontal to one unit vertical (100 percent slope).~~

SECTION 111. Section J107 is hereby amended to read as follows:

SECTION J107 FILLS

J107.1 General.

Unless otherwise recommended in the geotechnical report, fills shall comply with the provisions of this sSection.

Exception: The Building Official may permit a deviation from the provisions of this Appendix for minor fills not intended to support structures, where no geotechnical report has been prepared.

J107.2 Surface Preparation.

Fill slopes shall not be constructed on natural slopes steeper than 2 units horizontal to 1 unit vertical (50 percent slope). The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials (including any existing fill that does not meet the requirements of this Appendix), and scarifying the ground to provide a bond with the fill material.

Subdrains shall be provided under all fills placed in natural drainage courses and in other locations where seepage is evident, except where the Geotechnical Engineer or Engineering Geologist recommends otherwise. Such sub-drainage systems shall be of a material and design approved by the Geotechnical Engineer and acceptable to the Building Official. The Geotechnical Engineer shall provide continuous inspection during the process of subdrain installations. The location of the subdrains shall be shown on a

plan prepared by the Geotechnical Engineer. Excavations for the subdrains shall be inspected by the Engineering Geologist when such subdrains are included in the recommendations of the Engineering Geologist.

J107.3 Benching.

Where existing grade is at a slope steeper than one unit vertical in five units horizontal (20-percent slope) and the depth of the fill exceeds 5 feet (1524 mm) benching shall be provided into sound bedrock or other competent material as determined by the Geotechnical Engineer in accordance with Figure J107.3 or as determined by the Geotechnical Engineer. When fill is to be placed over a cut, ~~A~~a key shall be provided that is at least 10 feet (3048 mm) in width and 2 feet (610 mm) in depth. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be constructed thereon. The Geotechnical Engineer or Engineering Geologist, or both, shall inspect and approve the cut as being suitable for the foundation and placement of fill material before any fill material is placed on the excavation.

J107.4 Fill material.

Fill material shall not include organic, frozen or other deleterious materials. No rock or similar irreducible material greater than 12 inches (305 mm) in any dimension shall be included in fills.

Exception: The Building Official may permit placement of larger rock when the Geotechnical Engineer properly devises and recommends a method of placement, and continuously inspects the placement and approves the fill stability. The following requirements shall also apply:

1. Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan.

2. Rock sizes greater than 12 inches (0.3 m) in maximum dimension shall be 10 feet (3.0 m) or more below grade, measured vertically.

3. Rocks shall be placed so as to assure filling of all voids with well-graded soil.

4. The reports submitted by the Geotechnical Engineer shall acknowledge the placement of the oversized material and whether the work was performed in accordance with the engineer's recommendations and the approved plans.

5. The location of oversized rock dispersal areas shall be shown on the as-built plan.

J107.5 Compaction.

All fill material shall be compacted to a minimum of 90 percent of maximum density as determined by ASTM D1557, Modified Proctor, in lifts not exceeding 12 inches (305 mm) in depth within 40 feet (12.2 m) below finished grade and 93 percent of maximum dry density deeper than 40 feet (12.2 m) below finished grade, unless a lower relative compaction (not less than 90 percent of maximum dry density) is justified by the Geotechnical Engineer and approved by the Building Official. Where ASTM D1557, Modified Proctor is not applicable, a test acceptable to the Building Official shall be used.

Field density shall be determined by a method acceptable to the Building Official. However, not less than ten percent of the required density tests, uniformly distributed, shall be obtained by the Sand Cone Method.

Fill slopes steeper than 2 units horizontal to 1 unit vertical (50-percent slope) shall be constructed by the placement of soil a sufficient distance beyond the proposed finish slope to allow compaction equipment to operate at the outer surface limits of the final slope surface. The excess fill is to be removed prior to completion or rough grading. Other construction procedures may be utilized when it is first shown to the satisfaction of the Building Official that the angle of slope, construction method, and other factors will comply with the intent of this Section.

J107.6 Maximum slope.

The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes steeper than one unit vertical in two units horizontal (50-percent slope) shall be justified by a geotechnical reports ~~or engineering data~~conforming to the requirements of Section 111, containing a statement by the Geotechnical Engineer that the site has been investigated and an opinion that a steeper fill slope will be stable and will not create a hazard to public or private property. Substantiating calculations and supporting data may be required where the Building Official determines that such information is necessary to verify the stability and safety of the proposed slope. The Building Official may require the fill slope to be constructed with a face flatter in slope than 2 units horizontal to 1 unit vertical (50-percent slope) if the Building Official finds it necessary for stability and safety of the slope.

J107.7 Slopes to receive fill.

Where fill is to be placed above the top of an existing slope steeper than 3 units horizontal to 1 unit vertical (33-percent slope), the toe of the fill shall be set back from the top edge of the existing slope a minimum distance of 6 feet (1.8 m) measured horizontally or such other distance as may be specifically recommended by a Geotechnical Engineer or Engineering Geologist and approved by the Building Official.

J107.8 Inspection of fill.

For engineered grading, the Geotechnical Engineer shall provide sufficient inspections during the preparation of the natural ground and the placement and compaction of the fill to ensure that the work is performed in accordance with the conditions of plan approval and the appropriate requirements of this Appendix. In addition to the above, the Geotechnical Engineer shall provide continuous inspection during the entire fill placement and compaction of fills that will exceed a vertical height or depth of 30 feet (9.1 m) or result in a slope surface steeper than 2 units horizontal to 1 unit vertical (50-percent slope).

J107.9 Testing of fills.

Sufficient tests of the fill soils shall be made to determine the density and to verify compliance of the soil properties with the design requirements. This includes soil types and shear strengths in accordance with Section J111 Referenced Standards.

SECTION 112. Section J108 is hereby amended to read as follows:

SECTION J108 SETBACKS

J108.1 General.

Cut and fill slopes shall be set back from the property lines in accordance with this ~~s~~Section. Setback dimensions shall be measured perpendicular to the property line and shall be as shown in Figure J108.1, unless substantiating data is submitted justifying reduced setbacks and reduced setbacks are recommended in a geotechnical engineering and engineering geology report approved by the Building Official.

J108.2 Top of slope.

The setback at the top of a cut slope shall be not less than that shown in Figure J108.1, or than is required to accommodate any required interceptor drains, whichever is greater. For graded slopes the property line between adjacent lots shall be at the apex of the berm at the top of the slope. Property lines between adjacent lots shall not be located on a graded slope steeper than 5 units horizontal to 1 unit vertical (20-percent slope).

J108.3 Toe of fill s~~S~~lope protection.

The setback from the toe of a fill slope shall not be less than that shown by Figure J108.1. Where required to protect adjacent properties at the toe of a slope from adverse effects of the grading, additional protection, approved by the ~~b~~Building e~~O~~fficial, shall be included. Such protection may include but shall not be limited to:

1. Setbacks greater than those required by Figure J108.1.
2. Provisions for retaining walls or similar construction.
3. Erosion protection of the fill slopes.
4. Provision for the control of surface waters.

J108.4 Alternate setbacks.

The Building Official may approve alternate setbacks if he or she determines that no hazard to life or property will be created or increased. The Building Official may require an investigation and recommendation by a qualified engineer or Engineering Geologist to justify any proposed alternate setback.

SECTION 113. Figure J108.1 is hereby amended to read as follows:

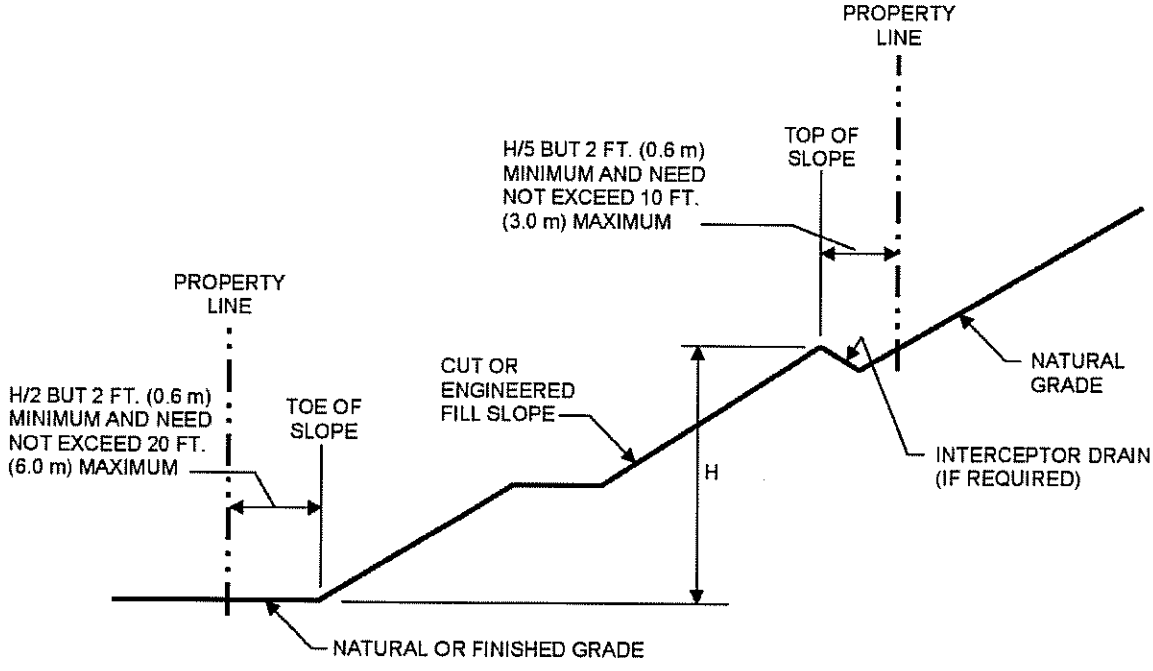


FIGURE J108.1
~~DRAINAGE~~SETBACK DIMENSIONS

SECTION 114. Section J109 is hereby amended to read as follows:

SECTION J109 DRAINAGE AND TERRACING

J109.1 General.

Unless otherwise recommended by a ~~registered design professional~~licensed Civil

Engineer and approved by the Building Official, drainage facilities and terracing shall be provided in accordance with the requirements of ~~this~~ sSection J109.2 for all cut and fill slopes 3 units horizontal to 1 unit vertical (33-percent slope) and steeper.

~~**EXCEPTION:** Drainage facilities and terracing need not be provided where the ground slope is not steeper than one unit vertical in three units horizontal (33-percent slope).~~

For slopes flatter than 3 units horizontal to 1 unit vertical (33-percent slope) and steeper than 5 units horizontal to 1 unit vertical (20-percent slope) a paved swale or ditch shall be installed at 30 foot (9.1 m) vertical intervals to control surface drainage and debris. Swales shall be sized based on contributory area and have adequate capacity to convey intercepted waters to the point of disposal as defined in Section J109.5. Swales must be paved with reinforced concrete not less than 3 inches (0.08 m) in thickness, reinforced with 6-inch (0.2 m) by 6-inch (0.2 m) No. 10 by No. 10 welded wire fabric or equivalent reinforcing centered in the concrete slab or an equivalent approved by the Building Official. Swales must have a minimum flow line depth of 1 foot (0.3 m) and a minimum paved width of 18 inches (0.5 m). Swales shall have a minimum gradient of not less than 5 percent. There shall be no reduction in grade along the direction of flow unless the velocity of flow is such that slope debris will remain in suspension on the reduced grade.

J109.2 Drainage ~~T~~terraces.

Drainage t~~T~~erraces at least ~~6 feet (1829 mm)~~8 feet (2.4 m) in width shall be established at not more than 30-foot (9144 mm) vertical intervals on all cut or fill slopes

to control surface drainage and debris. ~~Suitable access shall be provided to allow for cleaning and maintenance.~~

~~Where more than two terraces are required, one terrace, located at approximately mid-height, shall be at least 12 feet (3658 mm) in width.~~

~~Swales or ditches shall be provided on terraces. They shall have a minimum gradient of one unit vertical in 20 units horizontal (5 percent slope) and shall be paved with concrete not less than 3 inches (76 mm) in thickness, or with other materials suitable to the application. They shall have a depth not less than 12 inches (305 mm) and a width not less than 5 feet (1524 mm).~~

~~A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (1256 m2) (projected) without discharging into a down drain.~~When only one terrace is required, it shall be at mid-height. For cut or fill slopes greater than 100 feet (30.5 m) and up to 120 feet (36.6 m) in vertical height, one terrace at approximately mid-height shall be 20 feet (6.1 m) in width. Terrace widths and spacing for cut and fill slopes greater than 120 feet (36.6 m) in height shall be designed by the Civil Engineer and approved by the Building Official. Suitable access shall be provided to permit proper cleaning and maintenance.

Drainage swales on terraces shall have a longitudinal grade of not less than 5 percent nor more than 12 percent and a minimum depth of 1 foot (0.3 m) at the flow line. There shall be no reduction in grade along the direction of flow unless the velocity of flow is such that slope debris will remain in suspension on the reduced grade. Drainage swales must be paved with reinforced concrete not less than 3 inches (0.8 m)

in thickness, reinforced with 6-inch (0.2 m) by 6-inch (0.2 m) No. 10 by No. 10 welded wire fabric or equivalent reinforcing centered in the concrete slab or an approved equal paving. Drainage swales shall have a minimum depth at the deepest point of 1 foot (0.3 m) and a minimum paved width of 5 feet (1.5 m). Drainage swales on terraces shall be sized based on contributory area and have adequate capacity to convey intercepted waters to the point of disposal as defined in Section J109.5. Downdrains or drainage outlets shall be provided at approximately 300 foot (91.4 m) intervals along the drainage terrace or at equivalent locations. Downdrains and drainage outlets shall be of approved materials and of adequate capacity to convey the intercepted waters to the point of disposal as defined in Section J109.5.

J109.3 Interceptor drains and overflow protection.

Berms, ~~i~~interceptor drains, swales, or other devices shall be installed along the top of cut slopes ~~receiving drainage from a tributary width greater than 40 feet (12 192 mm), measured horizontally.~~ to prevent surface waters from overflowing onto and damaging the face of a slope. Berms used for slope protection shall not be less than 12 inches (0.3 m) above the level of the pad and shall slope back at least 4 feet (1.2 m) from the top of the slope.

Interceptor drains shall be installed along the top of graded slopes greater than 5 feet in height receiving drainage from a slope with a tributary width greater than 30 feet (9.1 m), measured horizontally. They shall have a minimum depth of 1 foot (305 mm) and a minimum width of 3 feet (915 mm). The slope shall be approved by the ~~b~~Building ~~o~~Official, but shall be not less than one unit vertical in 50 units horizontal (2-

percent slope). The drain shall be paved with concrete not less than 3 inches (76mm) in thickness, or by other materials suitable to the application and reinforced as required for drainage terraces. Discharge from the drain shall be accomplished in a manner to prevent erosion and shall be approved by the ~~b~~Building ~~o~~Official.

. . .

J109.5 Disposal.

All drainage facilities shall be designed to convey waters to the nearest practicable street, storm drain, or natural watercourse or drainage way approved by the Building Official or other appropriate governmental agency provided that the discharge of such waters at that location will not create or increase a hazard to life or property. Erosion of the ground in the area of discharge shall be prevented by installation of non-erosive down drains or other devices. Desilting basins, filter barriers, or other methods, as approved by the Building Official, shall be utilized to remove sediments from surface waters before such waters are allowed to enter streets, storm drains, or natural watercourses. If the drainage device discharges onto natural ground, riprap or a similar energy dissipator may be required.

Building pads shall have a minimum drainage gradient of 2 percent toward an approved drainage facility or a public street unless otherwise directed by the Building Official. A lesser slope may be approved by the Building Official for sites graded in relatively flat terrain, or where special drainage provisions are made, when the Building Official finds such modification will not result in a hazard to life or property.

SECTION 115. Section J110 is hereby amended to read as follows:

SECTION J110 SLOPE PLANTING AND EROSION CONTROL

J110.1 General.

The faces of cut and fill slopes shall be prepared and maintained to control erosion. This control shall ~~be permitted to~~ consist of effective planting, erosion control blankets, soil stabilizers, or other means as approved by the Building Official.

Exception: Erosion control measures need not be provided on cut slopes not subject to erosion due to the erosion-resistant character of the materials as approved by the Project Consultants, to the satisfaction of the Building Official.

. . .

J110.3 Planting.

The surface of all cut slopes more than 5 feet (1.5 m) in height and fill slopes more than 3 feet (0.9 m) in height shall be protected against damage from erosion by planting with grass or ground cover plants. Slopes exceeding 15 feet (4.6 m) in vertical height shall also be planted with shrubs, spaced at not to exceed 10 feet (3 m) on centers, or trees, spaced at not to exceed 20 feet (6.1 m) on centers; or a combination of shrubs and trees at an equivalent spacing, in addition to the grass or ground cover plants. The plants selected and planting methods used shall be suitable for the soil and climatic conditions of the site.

Plant material shall be selected which will produce a coverage of permanent planting to effectively control erosion. Consideration shall be given to deep-rooted plant material needing limited watering, maintenance, high root to shoot ratio, wind

susceptibility, and fire-retardant characteristics. All plant materials must be approved by the Building Official.

Planting may be modified for the site if specific recommendations are provided by both the Geotechnical Engineer and a Landscape Architect. Specific recommendations must consider soils and climatic conditions, irrigation requirements, planting methods, fire-retardant characteristics, water efficiency, maintenance needs, and other regulatory requirements. Recommendations must include a finding that the alternative planting will provide a permanent and effective method of erosion control. Modifications to planting must be approved by the Building Official prior to installation.

J110.4 Irrigation.

Slopes required to be planted by Section J110.3 shall be provided with an approved system of irrigation that is designed to cover all portions of the slope. Irrigation system plans shall be submitted to and approved by the Building Official prior to installation. A functional test of the system may be required.

For slopes less than 20 feet (6.1 m) in vertical height, hose bibs to permit hand watering will be acceptable if such hose bibs are installed at conveniently accessible locations where a hose no longer than 50 feet (15.2 m) is necessary for irrigation.

Irrigation requirements may be modified for the site if specific recommendations are provided by both the Geotechnical Engineer and a Landscape Architect. Specific recommendations must consider soils and climatic conditions, plant types, planting methods, fire-retardant characteristics, water efficiency, maintenance needs, and other regulatory requirements. Recommendations must include a finding that the alternative

irrigation method will sustain the proposed planting and provide a permanent and effective method of erosion control. Modifications for irrigation systems must be approved by the Building Official prior to installation.

J110.5 Plans and specifications.

Planting and irrigation plans shall be submitted for slopes which are required to be planted and irrigated pursuant to Sections J110.3 and J110.4. Except as otherwise required by the Building Official for minor grading, the plans for slopes 20 feet (6.1 m) or more in vertical height shall be prepared and signed by a Civil Engineer or Landscape Architect. If requested by the Building Official, planting and irrigation details shall be included on the grading plan.

J110.6 Rodent control.

Fill slopes shall be protected from potential slope damage by a preventative program of rodent control.

J110.7 Release of security.

The planting and irrigation systems required by this Section shall be installed as soon as practical after rough grading. Prior to final approval of grading and before the release of the grading security, the planting shall be well established and growing on the slopes and there shall be evidence of an effective rodent control program.

J110.8 National Pollutant Discharge Elimination System (NPDES) compliance.

J110.8.1 General.

All grading plans and permits and the owner of any property on which such

grading is performed shall comply with the provisions of this Section for NPDES compliance.

All best management practices shall be installed before grading begins or as instructed in writing by the Building Official for unpermitted grading as defined by Section J103.3. As grading progresses, all best management practices shall be updated as necessary to prevent erosion and to control construction-related pollutants from discharging from the site. All best management practices shall be maintained in good working order to the satisfaction of the Building Official until final grading approval has been granted by the Building Official and all permanent drainage and erosion control systems, if required, are in place. Failure to comply with this Section is subject to "Noncompliance Penalties" pursuant to Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.2 Storm Water Pollution Prevention Plan (SWPPP).

The Building Official may require a SWPPP. The SWPPP shall contain details of best management practices, including desilting basins or other temporary drainage or control measures, or both, as may be necessary to control construction-related pollutants which originate from the site as a result of construction-related activities. When the Building Official requires a SWPPP, no grading permit shall be issued until the SWPPP has been submitted to and approved by the Building Official.

For unpermitted grading as defined by Section J103.3 upon written request, a SWPPP in compliance with the provisions of this Section and Section 106.4.3 for

NPDES compliance shall be submitted to the Building Official. Failure to comply with this Section is subject to "Noncompliance Penalties" per Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.3 Erosion and Sediment Control Plans (ESCP).

Where a grading permit is issued and the Building Official determines that the grading will not be completed prior to November 1, the owner of the site on which the grading is being performed shall, on or before October 1, file or cause to be filed with the Building Official an ESCP. The ESCP shall include specific best management practices to minimize the transport of sediment and protect public and private property from the effects of erosion, flooding, or the deposition of mud, debris, or construction-related pollutants. The best management practices shown on the ESCP shall be installed on or before October 15. The plans shall be revised annually or as required by the Building Official to reflect the current site conditions.

The ESCP shall be accompanied by an application for plan checking services and plan-checking fees in an amount determined by the Building Official, up to but not exceeding 10 percent of the original grading permit fee.

Failure to comply with this Section is subject to "Noncompliance Penalties" pursuant to Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.4 Storm Water Pollution Prevention Plan (SWPPP), effect of noncompliance.

Should the owner fail to submit the SWPPP or the ESCP as required by Section J110.8 or fail to install the best management practices, it shall be deemed that a default has occurred under the conditions of the grading permit security. The Building Official may thereafter enter the property for the purpose of installing, by County forces or by other means, the drainage, erosion control, and other devices shown on the approved plans, or if there are no approved plans, as the Building Official may deem necessary to protect adjoining property from the effects of erosion, flooding, or the deposition of mud, debris, or constructed-related pollutants.

The Building Official shall also have the authority to impose and collect the penalties imposed by Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.5 Noncompliance penalties.

The amount of the penalties shall be as follows:

1. If a SWPPP or an ESCP is not submitted as prescribed in Sections J110.8.2 and J110.8.3:

Grading Permit Volume	Penalty
1-10,000 cubic yards (1-7645.5 m^3)	$50.00 per day
10,001-100,000 cubic yards (7646.3-76455 m^3)	$250.00 per day
More than 100,000 cubic yards (76455 m^3)	$500.00 per day

2. If the best management practices for storm water pollution prevention and wet weather erosion control, as approved by the Building Official, are not installed as prescribed in this Section J110.8:

Grading Permit Volume	Penalty
1-10,000 cubic yards (1-7645.5 m^3)	$100.00 per day
10,001-100,000 cubic yards (7646.3-76455 m^3)	$250.00 per day
More than 100,000 cubic yards (76455 m^3)	$500.00 per day

NOTE: See Section 108 for inspection request requirements.

SECTION 116. Section J111 is hereby amended to read as follows:

SECTION J111 REFERENCED STANDARDS

~~ASTM D1557-12~~	~~Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort [56,000 ft-lb/ft^3 (2,700kN-m/m^3)].~~	~~J 107.5~~

These regulations establish minimum standards and are not intended to prevent the use of alternate materials, methods, or means of conforming to such standards, provided such alternate has been approved by the Building Official.

The Building Official shall approve such an alternate provided he or she determines that the alternate is, for the purpose intended, at least the equivalent of that prescribed in this Code in quality, strength, effectiveness, durability, and safety.

The Building Official shall require that sufficient evidence or proof be submitted to substantiate any claims regarding the alternate.

The standards listed below are recognized standards. Compliance with these recognized standards shall be prima facie evidence of compliance with the standards set forth in Sections J104 and J107.

ASTM D 1557 – Latest Revision	Laboratory Characteristics Compaction of Soil Using Modified Effort	J107.5
ASTM D 1556 – Latest Revision	Density and Unit Weight of Soils In Place by the Sand Cone Method	J104.2.3, J104.3 and J107.9
ASTM D 2167 – Latest Revision	Density and Unit Weight of Soils In Place by the Rubber Balloon Method	J104.2.3 J104.3 and J107.9

ASTM D 2937 – Latest Revision	Density of Soils in Place by the Drive Cylinder Method	J104.2.3 J104.3 and J107.9
ASTM D 2922 – Latest Revision	Density of Soil and Soil Aggregate In Place by Nuclear Methods	J104.2.3 J104.3 and J107.9
ASTM D 3017 – Latest Revision	Water Content of Soil and Rock in Place by Nuclear Methods	J104.2.3, J104.3 and J107.9

SECTION 117. The provisions of this ordinance contain various changes, modifications, and additions to the 2016 California Building Code. Some of those changes are administrative in nature in that they do not constitute changes or modifications to requirements contained in the building standards published in the California Building Standards Code.

Pursuant to California Health and Safety Code sections 17958.5, 17958.7, and 18941.5, the Board of Supervisors hereby expressly finds that all of the changes and modifications to requirements contained in the building standards published in the California Building Standards Code contained in this ordinance that are not administrative in nature, are reasonably necessary because of local climatic, geological, for topographical conditions in the County of Los Angeles as more particularly described in the table set forth below.

BUILDING CODE AMENDMENTS

Code Section	Condition	Explanation of Amendment
701A.1	Climatic	Clarifies the application of Chapter 7A to include additions, alterations, and/or relocated buildings. Many areas of the County have been designated as Fire Hazard Severity Zones due to low humidity, strong winds, and dry vegetation. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.

Code Section	Condition	Explanation of Amendment
701A.3	Climatic	Clarifies the application of Chapter 7A to include additions, alterations, and/or relocated buildings. Many areas of the County have been designated as Fire Hazard Severity Zones due to the increased risk of fire caused by low humidity, strong winds, and dry vegetation. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
701A.3.1	Climatic	Clarifies the application of Chapter 7A to include additions, alterations, and/or relocated buildings. Many areas of the County have been designated as Fire Hazard Severity Zones due to the increased risk of fire caused by low humidity, strong winds, and dry vegetation. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
703A.5.2 and 703A.5.2.2	Climatic	Disallows the use of wood-shingle/wood-shake roofs due to the increased risk of fire in the County caused by low humidity, strong winds, and dry vegetation in high fire severity zones.
704A.3	Climatic	Disallows the use of wood-shingle/wood-shake roofs due to the increased risk of fire in the County caused by low humidity, strong winds, and dry vegetation in high fire severity zones.
705A.2	Climatic	Disallows the use of wood-shingle/wood-shake roofs and requires the use of Class A roof covering due to the increased risk of fire in the County caused by low humidity, strong winds, and dry vegetation in high fire severity zones.
1030.4	Geological	The greater Los Angeles/Long Beach region is a densely populated area having buildings constructed over and near a vast array of earthquake fault systems capable of producing major earthquakes, including but not limited to the 1994 Northridge Earthquake. The proposed amendment is intended to prevent occupants from being trapped in a building and to allow rescue workers to easily enter after an earthquake.
1507.3.1	Geological	Section amended to require concrete and clay tiles to be installed over solid structural sheathing boards only, due to the increased risk of significant earthquakes in the County. The changes in Section 1507.3.1 are needed because there were numerous observations of tile roofs pulling away from wood framed buildings following the

Code Section	Condition	Explanation of Amendment
		1994 Northridge Earthquake. The Structural Engineers Association of Southern California ("SEAOSC") and the Los Angeles City Joint Task Force committee findings indicated significant problems with tile roof due to inadequate design and/or construction. Damage was observed where sheathing beneath the tile roofs was not nailed adequately or the nails were not attached on each side of each tile or the nail just pulled out over a period of time because the shank of the nails were smooth. Therefore, the amendment is needed to minimize such occurrences in the event of future significant earthquakes.
Table 1507.3.7	Geological	Table amended to require proper anchorage for clay or concrete tiles from sliding or rotating due to the increased risk of significant earthquakes in the County. This amendment incorporates the design provisions developed based on detailed study of the 1994 Northridge and the 1971 Sylmar earthquakes.
1613.7 and 1613.7.1	Geological	The inclusion of the importance factor in this equation has the unintended consequence of reducing the minimum seismic separation distance for important facilities such as hospital, school, police, and fire station, etc., from adjoining structures. The deletion of the importance factor from Equation 12.12-1 will ensure that a safe seismic separation distance is provided. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1613.7.2	Geological	Damage to one- and two-family dwellings of light frame construction resulting from the Northridge Earthquake may have been partially attributed to vertical irregularities common to this type of occupancy and construction. In an effort to improve quality of construction and incorporate lessons learned from studies after the Northridge Earthquake, the modification to ASCE 7 Section 12.2.3.1 by limiting the number of stories and height of the structure to two stories will significantly minimize the impact of vertical irregularities and concentration of inelastic behavior from mixed structural systems. This amendment is a

Code Section	Condition	Explanation of Amendment
		continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1613.7.3	Geological	A SEAOSC and Los Angeles City Joint Task Force investigated the performance of concrete and masonry construction with flexible wood diaphragm failures after the Northridge earthquake. It was determined that continuous ties are needed at specified spacing to control cross grain tension in the interior of the diaphragm. Additionally, subdiaphragm shears need to be limited to control combined orthogonal stresses within the diaphragm. Recognizing the importance and need to continue the recommendation made by the task force, but also taking into consideration the improved performance and standards for diaphragm construction today, a proposal to increase the continuous tie spacing limit to 40 ft in lieu of 25 ft and to use 75 percent of the allowable code diaphragm shear to determine the depth of the sub-diaphragm in lieu of the 300 plf is deemed appropriate and acceptable. The Los Angeles region is within a very active geological location. Due to the frequency of this type of failure during previous significant earthquakes, various jurisdictions within this region have taken these additional steps to prevent roof or floor diaphragms from pulling away from concrete or masonry walls. This amendment is a continuation of an amendment adopted during a previous Code adoption cycles.
1613.7.4	Geological	This change is to implement the provisions in ASCE 7-16. This provision allows for a limited value to be used in the seismic design of a building when certain criteria are met. The current provision does not clearly state the criteria, and has created misapplications of this section. It is necessary to adopt this provision now to avoid further misinterpretation of the intent of the 5 story limit, and how the height of the building is measured. The Los Angeles region is within a very active geological location. When applying the story height limit, mezzanines need to be considered as floor levels due to the added mass, overturning forces, and the variation in shear wall stiffnesses that are created.

Code Section	Condition	Explanation of Amendment
		ASCE 7-16 provisions need to be incorporated into the Code to ensure that new buildings and additions to existing buildings are designed and constructed in accordance with the purpose and intent of the Building Code.
1613.8	Geological Topographical	Section is added to improve seismic safety of buildings constructed on or into hillsides. Due to the local topographical and geological conditions of the sites within the Los Angeles region and their probabilities for earthquakes, this technical amendment is required to address and clarify special needs for buildings constructed on hillside locations. A SEAOSC and Los Angeles City Joint Task Force investigated the performance of hillside building failures after the Northridge earthquake. Numerous hillside failures resulted in loss of life and millions of dollars in damage. These criteria were developed to minimize the damage to these structures and have been in use by both the City and County of Los Angeles for several years with much success. This amendment is a continuation of an amendment adopted during previous Code adoption cycles.
1704.6	Geological	The language in Sections 1704.6 of the California Building Code permits the owner to employ any registered design professional to perform structural observations with minimum guidelines. However, it is important that the registered design professional responsible for the structural design has thorough knowledge of the building he/she designed. By requiring the registered design professional responsible for the structural design or their designee who was involved with the design to observe the construction, the quality of the observation for major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will greatly be increased. Additional requirements are provided to help clarify the role and duties of the structural observer and the method of reporting and correcting observed deficiencies to the Building Official. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to

Code Section	Condition	Explanation of Amendment
		the increased risk of significant earthquakes in the County.
1704.6.1	Geological	With the higher seismic demand placed on buildings and structures in this region, the language in Sections 1704.6.1 Item 3 of the California Building Code would permit many low-rise buildings and structures with complex structural elements to be constructed without the benefit of a structural observation. By requiring a registered design professional to observe the construction, the quality of the observation for major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will be greatly increased. An exception is provided to permit simple structures and buildings to be excluded. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1705.3	Geological	Results from studies after the 1994 Northridge Earthquake indicated that a significant portion of the damage was attributable to lack of quality control during construction resulting in poor performance of the building or structure. Therefore, the amendment restricts the exceptions to the requirement for special inspection. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1705.12	Geological	In Southern California, very few detached one- or two-family dwellings not exceeding two stories above grade plane are built as "box-type" structures, specially for those in hillside areas and near the oceanfront. Many with steel moment frames or braced frames, and or cantilevered columns can still be shown as "regular" structures by calculations. With the higher seismic demand placed on buildings and structures in this region, the language in Section 1705.12 Item 3 of the California Building Code would permit many detached one- or two-family dwellings not exceeding two stories above grade plane with complex structural elements to be constructed without the benefit of special

Code Section	Condition	Explanation of Amendment
		inspections. By requiring special inspections, the quality of major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will be greatly increased. The exception should only be allowed for detached one- or two-family dwellings not exceeding two stories above grade plane assigned to Seismic Design Category A, B, and C.
1807.1.4	Climatic Geological	No substantiating data has been provided to show that a wood foundation is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood retaining walls, when they are not properly treated and protected against deterioration, have performed very poorly and have led to slope failures. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using wood foundations that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the local climate and the increased risk of significant earthquakes in the County.
1807.1.6	Geological	With the higher seismic demand placed on buildings and structures in this region, it is necessary to take precautionary steps to reduce or eliminate potential problems that may result by following prescriptive design provisions that do not take into consideration the surrounding environment. Plain concrete performs poorly in withstanding the cyclic forces resulting from seismic events. In addition, no substantiating data has been provided to show that under-reinforced foundation walls are effective in resisting seismic loads and may

Code Section	Condition	Explanation of Amendment
		potentially lead to a higher risk of failure. It is important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these issues into consideration. This amendment is a continuation of an amendment adopted during previous Code adoption cycles.
1809.3 and Figure 1809.3	Geological	With the higher seismic demand placed on buildings and structures in this region, it is necessary to take precautionary steps to reduce or eliminate potential problems that may result for under-reinforced footings located on sloped surfaces. Requiring minimum reinforcement for stepped footings is intended to address the problem of poor performance of plain or under-reinforced footings during a seismic event. This amendment is a continuation of an amendment adopted during previous Code adoption cycles.
1809.7 and Table 1809.7	Geological	No substantiating data has been provided to show that under-reinforced footings are effective in resisting seismic loads and therefore may potentially lead to a higher risk of failure. This amendment requires minimum reinforcement in continuous footings to address the problem of poor performance of plain or under-reinforced footings during a seismic event. With the higher seismic demand placed on buildings and structures in this region, it is necessary to take precautionary steps to reduce or eliminate potential problems that may result by following prescriptive design provisions for footings that do not take into consideration the surrounding environment. It is important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these factors into consideration. This amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force that investigated the performance deficiencies observed in the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous Code adoption cycles.
1809.12	Climatic Geological	No substantiating data has been provided to show that timber footings are effective in supporting buildings and structures during a seismic event while being subject to

Code Section	Condition	Explanation of Amendment
		deterioration caused by the combined detrimental effects of constant moisture in the soil and wood-destroying organisms. Timber footings, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using timber footings that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the local climate and the increased risk of significant earthquakes in the County.
1810.3.2.4	Climatic Geological	No substantiating data has been provided to show that timber footings are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effects of constant moisture in the soil and wood-destroying organisms. Timber footings, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using timber footings that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous Code adoption

Code Section	Condition	Explanation of Amendment
		cycles, and is necessary due to the local climate and the increased risk of significant earthquakes in the County.
1905.1.7	Geological	This amendment requires minimum reinforcement in continuous footings to address the problem of poor performance of plain or under-reinforced footings during a seismic event. This amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force that investigated the poor performance observed in the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1905.1.8 through 1905.1.11	Geological	These amendments are intended to carry over critical provisions for the design of concrete columns in moment frames from the Uniform Building Code (UBC). Increased confinement is critical to the integrity of such columns and these modifications ensure that it is provided when certain thresholds are exceeded. In addition, this amendment carries over from the UBC a critical provision for the design of concrete shear walls. It essentially limits the use of very highly gravity-loaded walls from being included in the seismic load resisting system, since their failure could have a catastrophic effect on the building. Furthermore, this amendment was incorporated into this Code based on observations from the 1994 Northridge Earthquake. Rebar placed in very thin concrete topping slabs has been observed in some instances to have popped out of the slab due to insufficient concrete coverage. This modification ensures that critical boundary and collector rebars are placed in sufficiently thick slabs to prevent buckling of such reinforcements. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2304.10.1 and Table 2304.10.1	Geological	Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this proposed local amendment limits the use of staple fasteners in resisting or transferring seismic forces. In September

Code Section	Condition	Explanation of Amendment
		2007, limited cyclic testing data was provided to the ICC Los Angeles Chapter Structural Code Committee showing that stapled wood structural shear panels do not exhibit the same behavior as nailed wood structural shear panels. The test results of stapled wood structural shear panels demonstrated much lower strength and drift than nailed wood structural shear panel test results. Therefore, the use of staples as fasteners to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic testing. This amendment is a continuation of a similar amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2304.12.5	Climatic Geological	No substantiating data has been provided to show that wood used in retaining or crib walls is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood used in retaining or crib walls, when it is not properly treated and protected against deterioration, has performed very poorly. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using wood in retaining or crib walls that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the local climate and the increased risk of significant earthquakes in the County.
2305.4	Geological	The overdriving of nails into the structural wood panels still remains a concern when pneumatic nail guns are used for wood structural panel shear wall nailing. Box

Code Section	Condition	Explanation of Amendment
		nails were observed to cause massive and multiple failures of the typical 3/8-inch thick plywood during the 1994 Northridge Earthquake. The use of clipped head nails continues to be restricted from use in wood structural panel shear walls where the minimum nail head size must be maintained in order to minimize nails from pulling through sheathing materials. Clipped or mechanically driven nails used in wood structural panel shear wall construction were found to perform much worse in previous wood structural panel shear wall testing done at the University of California Irvine. The existing test results indicated that, under cyclic loading, the wood structural panel shear walls were less energy absorbent and less ductile. The panels reached ultimate load capacity and failed at substantially less lateral deflection than those using same size hand-driven nails. This amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2305.5	Geological	Many of the hold-down connectors currently in use do not have any acceptance report based on dynamic testing protocols. This amendment continues to limit the allowable capacity to 75% of the acceptance report value to provide an additional factor of safety for statically tested anchorage devices. Cyclic forces imparted on buildings and structures by seismic activity cause more damage than equivalent forces which are applied in a static manner. Steel plate washers will reduce the additional damage which can result when hold-down connectors are fastened to wood framing members. This amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force that investigated the poor performance observed in the 1994 Northridge Earthquake. This amendment is a continuation of an

Code Section	Condition	Explanation of Amendment
		amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2306.2 2306.3 2307.2 2308.6.5.1 2308.6.5.2 Figure 2308.6.5.1 and Figure 2308.6.5.2	Geological	The SEAOSC and the Los Angeles City Joint Task Force that investigated damage to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with staples are based on monotonic testing and do not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with staples would exhibit the same behavior as wood structural panels fastened with common nails. The test result revealed that wood structural panels fastened with staples demonstrated much lower strength and stiffness than wood structural panels fastened with common nails. It was recommended that the use of staples as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Category D, E and F unless it can be substantiated by cyclic testing. Furthermore, the cities and unincorporated areas within the Los Angeles region have taken extra measures to maintain the structural integrity of the framing of shear walls and diaphragms designed for high levels of seismic forces by requiring wood sheathing be applied directly over the framing members and prohibiting the use of panels placed over gypsum sheathing. This amendment is intended to prevent the undesirable performance of nails when gypsum board softens due to cyclic earthquake displacements and the nail ultimately does not have any

Code Section	Condition	Explanation of Amendment
		engagement in a solid material within the thickness of the gypsum board. This amendment continues the previous amendment adopted during the 2007 Code adoption cycle.
2308.6.8.1	Geological	With the higher seismic demand placed on buildings and structures in this region, interior walls can easily be called upon to resist over half of the seismic loading imposed on simple buildings or structures. Without a continuous foundation to support the braced wall line, seismic loads would be transferred through other elements such as non-structural concrete slab floors, wood floors, etc. The purpose of this amendment is to limit the use of the exception to structures assigned to Seismic Design Category A, B or C where lower seismic demands are expected. Requiring interior braced walls be supported by continuous foundations is intended to reduce or eliminate the poor performance of buildings or structures. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
Table 2308.6.1	Geological	This amendment specifies minimum sheathing thickness and nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands placed on buildings or structure in this region. This proposed amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force that investigated the performance deficiencies observed in the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2308.6.9	Geological	Due to the high geologic activities in the Southern California area and the required higher level of performance of buildings and structures, this amendment limits the use of staple fasteners in resisting or transferring seismic forces. In September 2007,

Code Section	Condition	Explanation of Amendment
		limited cyclic testing data was provided to the ICC Los Angeles Chapter Structural Code Committee showing that stapled wood structural shear panels do not exhibit the same behavior as nailed wood structural shear panels. The test results of stapled wood structural shear panels demonstrated much lower strength and drift than nailed wood structural shear panel test results. Therefore, the use of staples as fasteners to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic testing. This amendment is a continuation of a similar amendment adopted during previous Code adoption cycles.
J101.1	Geological Topographical Climate	This Section is revised to include erosion and sediment control measures to address the complex and diverse set of soil types and geologic conditions that exist in the Los Angeles County region.
J101.10	Geological Topographical Climate	This section is revised to maintain safety and integrity of public or private property adjacent to grading sites.
J103.1 – J103.2 and Figure J103.2	Geological Topographical Climate	Sections revised to provide adequate control of grading operations typical to the Los Angeles County region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J104.2.1 – J104.4	Geological Topographical Climate	Sections revised or added to provide adequate control of grading operations typical to the Los Angeles County region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J105.1-J105.14	Geological Topographical Climate	Sections revised or added to provide adequate control of grading operations typical to the Los Angeles County region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J106.1	Geological Topographical Climate	Section revised to require more stringent cut slope ratios to address the complex and diverse set of soil types and geologic conditions that exist in the Los Angeles County region.
J107.1-J107.7	Geological Topographical	Sections revised to provide more stringent fill requirements for slope stability, and settlement due to

Code Section	Condition	Explanation of Amendment
	Climate	the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J107.8 – J107.9	Geological Topographical Climate	Sections revised to provide more stringent inspection and testing requirements for fill slope stability due to the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J108.1 – J108.4	Geological Topographical Climate	Sections revised to provide more stringent slope setback requirements to address the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J109.1 – J109.3	Geological Topographical Climate	Sections revised to provide more stringent drainage and terracing requirements to address the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J109.5	Geological Topographical Climate	Subsection added to provide for adequate outlet of drainage flows due to the diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J110.1 - J110.8.5	Geological Topographical Climate	Sections revised or added to provide for State requirements of storm water pollution prevention and more stringent slope planting, and slope stability requirements to control erosion due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J111	Geological Topographical Climate	Section revised to reference additional standards for soils testing due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.

SECTION 118. This ordinance shall become operative on January 1, 2017.

[TITLE262016CSCC]